

1. A 20 year old woman gives a history of sharp pain in the lower abdomen for 2 - 3 days every month approximately 2 weeks before the menses. The most probable etiology for her pain is :

a) Endometriosis

b) Dysmenorrhea

c) Pelvic tuberculosis

d) Mittelschmerz

Correct Answer - D

Mittelschmerz

- A female giving history of sharp pain in lower abdomen, every month, 2 weeks before the menstruation suggests mittelschmerz as the diagnosis.
- Mittelschmerz is synonymous to painful ovulation. Pain is associated with rupture of ovarian follicle at the time of ovulation
Characteristics of : Mittelschmerz or Ovular pain
- It appears in the mid-menstrual period.^o
- Pain is usually situated in the hypogastrium or to one iliac fossa.^o
- Pain is usually located on one side and does not change side according to which ovary is ovulating.^o
- Nausea and vomiting is conspicuously absent.^o
- It rarely lasts for more than 12 hours.^o
- It may be associated with slight vaginal bleeding or mucoid discharge.^o
- The probable factors - Increased tension of graafian follicle just prior

are :

to rupture.^o

- Peritoneal irritation by follicular fluid following ovulation.^o

- Contraction of tubes and uterus.^o

Management :

- Assurance and analgesics
 - In refractory cases cycles are made anovular by giving OCPs
- Also Know : The phenomenon of ovulation bleeding or mucus tinged with blood at the time of ovulation is called as mittel blut^o . This may be associated with ovulation pain, although each may occur independently.

2. Progesterone is produced by

a) Granulosa luteal cells

b) Stroma of the ovary

c) Theca cells

d) Sertoli cells

Correct Answer - A
Granulosa luteal cells

3. In colposcopy, following are visualized except :

a) Upper 2/3rd endocervix

b) Lower 1/3rd endocervix

c) Vault of vagina

d) Lateral fornix

Correct Answer - A

Upper 2/3rd endocervix

- Colposcopy is a method to evaluate the changes in the terminal vascular network of the cervix, the transformation zone, Vagina and Fornix.
- In the cervix, upper 2/3rd of endocervix is not visualized by colposcopy (the maximum limit being 5 mm above the canal).
- A colposcope is a binocular microscope producing magnification of 5 – 15 times.°
- Colposcopy is done after application of 3 – 5% acetic acid, to the abnormal area.°
- It can detect cervical dysplasias, metaplasia and carcinoma in situ.°

Indications (**very important**)

:

In case of abnormal pap smear cytology.°

- To locate abnormal areas.°
- To obtain directed biopsies.°
- Conservative therapy under colposcopic guidance.°
- For follow up of patients treated conservatively.°

Some other Indications

:

- In case of unexplained intermenstrual or post coital bleeding.
- History of Inutero Diethylstilbestrol exposure.
- Vulva' or vaginal neoplasia.

For more details on Colposcopy, see Chapter 12 B – CIN and Ca Cervix.

4. Hysteroscopy means visualization of :

a) Genital tract

b) Fallopian tube

c) Uterine cavity

d) Cervix

Correct Answer - C
Uterine cavity

5. Hysteroscopy is used in all EXCEPT :

a) Uterine synechiae

b) Abnormal vaginal bleeding

c) Infertility

d) None

Correct Answer - D
None

6. The most important indication for surgical repair of a Bicornuate Uterus is :

a) Infertility

b) Dysmenorrhoea

c) Menorrhagia

d) Habitual abortion

Correct Answer - D

Habitual abortion

Bicornuate uterus is caused by incomplete lateral fusion of the mullerian ducts (only the lower parts of the duct fuse, leaving the cornua separate). It is characterized by 2 separate but communicating endometrial cavities and a single uterine cervix.

Failure of fusion may extend to the cervix resulting in a complete bicornuate uterus or may be partial causing a milder form.

Bicornuate uterus causes :

- Menorrhagia° (because of larger bleeding surface)
- Spasmodic dysmenorrhea.°

But most of the cases are first recognized during pregnancy as a result of pregnancy mishap like :

- Abortions and premature labour.°
- Malpresentations - Transverse lie is favoured.°
- Insufficient uterine action leading to retained placenta and PPH.°

Diagnosis — On bimanual examination it may be possible to feel the two separate uterine horns or uterus may appear unusually wide.°

- HSG is the initial diagnostic step in evaluating a possible bicornuate uterus but HSG does not differentiate between a bicornuate and septate uterus.
- To distinguish a septate uterus from bicornuate uterus — USG

should be done.

Management : Bicornuate uterus requires surgical treatment only if it causes habitual abortions.°

"When a bicornuate or septate uterus has caused not less than three Miscarriages and no pregnancy has resulted in a viable child, surgery may be indicated."

"Surgical reconstruction of the bicornuate uterus has been advocated in women with multiple spontaneous abortions and in whom no other causative factors are identified."

Surgery done is : Stressmann Metroplasty° where an incision is made over the uterus and the two horns are sutured together to form a single cavity.

After such a surgery : if woman conceives she should be taken up for Elective Caesarean at 38 weeks of Gestation.°

7. True about trichomonas vaginalis :

a) Flagellated parasite

b) Fungal infection

c) Pruritus

d) A and C both

Correct Answer - D

A and C both

Flagellated parasite; Pruritus; and Sexually transmitted disease

- Trichomoniasis is caused by a flagellated parasite – *Trichomonas vaginalis*.
- It is the most commonly encountered vaginal infection and is sexually transmitted. It affects female of reproductive age group more commonly.
Patients complain of profuse frothy thin creamy or greenish coloured malodorous discharge with pruritus.° For

8. Commonest organism causing Acute Salpingitis:

a) Mycoplasma

b) Chlamydia

c) Gonococcal

d) Treponema

Correct Answer - C
Gonococcal

9. Commonest cause of genital fistulae in India :

a) Obstructed labour

b) Operation therapy

c) Radiotherapy

d) Laparoscopic injuries

Correct Answer - A
Obstructed labour

10. Clinically vesicovaginal and ureterovaginal fistula are differentiated by

:

a) USG

b) IVP

c) Cystoscopy with dye

d) Methylene blue three swab test

Correct Answer - D
Methylene blue three swab test

11. TB endometritis causes infertility by :

a) Causing anovulation

b) Destroying endometrium Tubal blockage

c) Ciliary dysmotility

d) Option B and C Both

Correct Answer - D

Ans. is b and c i.e. Destroying endometrium; and Tubal blockage

- Most common site for genital T:B is fallopian tube (90% cases) .
- Uterus is involved in 70% cases of genital tuberculosis.
- The infection to uterus descends from the tube i.e. if T:B endometritis is present, invariably tubes are involved.
- Most common symptom of Genital TB : **Infertility** (35 – 60%).
Infertility^o is either due to blockage of fallopian tube^o or due to loss of tubal function even if tubes are patent.^o

Tubercular endometritis causes uterine scarring which destroys the endometrium leading to synechia formation (Ashermann syndrome) and infertility.

"In developing countries, genital TB may account for 3% or more of patients with infertility. In these cases tuba! damage and endometrial adhesions are the underlying cause."

12. Lady with infertility with bilateral tubal block at cornua : best method of management is :

a) Laparoscopy and hysteroscopy

b) Hydrotubation

c) IVF

d) Tuboplasty

Correct Answer - C
IVF

13. In which case homologous artificial insemination is used in females :

a) Hormonal disturbance

b) Tubal block

c) Cervical factor

d) All of the above

Correct Answer - C

Ans. is c i.e. Cervical factor

Artificial insemination is mainly a method for overcoming male factor infertility, it can also be used in specific cases of female factor infertility viz.:

- Anatomical defect of the vagina and cervix.
- In cases of Vaginismus where sexual counselling has failed.
- Antisperm antibodies in cervical mucus. Indications for Artificial insemination :
- Oligospermia after sperm washout.
- Impotency
- Premature / Retrograde ejaculation
- Hypospadias
- Antisperm antibodies in the cervical mucus
- Unexplained infertility
- XY fractionation of sperm for sex selection, in genetic and chromosomal abnormalities.

Techniques used for artificial insemination include :

1. intrauterine and intrafallopian transfer done via hysteroscope
2. intracervical transfer
3. pericervical and vaginal transfer
4. direct intraperitoneal insemination (in case of unexplained infertility)

The semen is concentrated and its quality improved by the swim up technique or by use of percoll gradient.

The semen with normal sperms with good motility thus obtained is then inseminated into the female genital tract. **Timing** – It is done around ovulation.

Extra **Edge** : *Bijoy Shree Gupta*

Indications for donor insemination :

1. Azoospermia
2. Vasectomy (where reversal has failed or has a poor prognosis)
3. Untreatable oligospermia and other seminal fluid anomalies associated with male infertility
4. Hereditary or genetic disorder in the male partner example :
Haemophilia, Tay-Sachs disease, Huntington's chorea.
5. Male partner has intractable ejaculatory dysfunction secondary to trauma, surgery, medication, psychological or neurological disorder.
6. The female recipient is Rh negative and severely rhesus isoimmunized with a Rh positive male partner.
7. Male partner has an intractable STD eg : HIV
8. Females without male partners.

14. Asherman syndrome is due to :

a) Overdose drugs

b) Postabortion curettage

c) Spticemia

d) Contraceptal pills

Correct Answer - B
Postabortion curettage

15. The Spinnbarkeit of cervical mucous in a woman is maximum at one of the following phases of the cycle :

a) Early proliferative

b) Ovulatory phase

c) Post-ovulatory phase

d) Menstrual phase

Correct Answer - B

Ovulatory phase

Spinnbarkeit (Egg White) Cervical Mucus:

- Most fertile
- Stringy, stretchy
- Usually a result of high estrogen levels.
- Allows the sperm to swim easily into the cervix
- Similar to raw egg white consistency
- Stretchable—Mucus can hold a stretch which can be up to 4 or 5 inches
- At the time of ovulation, you have 2 or 3 days of egg white cervical mucus and then your temperature will take a little dip before rising the next day.

Watery Cervical Mucus

- Second best for conception
- Allows sperm to move into the cervix, but not as easy for the sperm to swim
- Watery CM is clear in color and drips or runs off your fingers.

Creamy Cervical Mucus

- Considered non-fertile since it greatly restricts the movement of sperm.
- Often pearly white or creamy yellow.
- Thick and feels like lotion when rubbed between the fingers.

Sticky Cervical Mucus

- Least fertile
- Thick and chunky and feels kind of like paste or like glue from a glue stick, making it hard for sperm to swim through

16. Least common complication of fibroid is :

a) Menstrual disorder

b) Malignancy

c) Urinary retention

d) Degeneration

Correct Answer - B

Ans. is **b i.e. Malignancy**

Sarcomatous change / malignancy in a fibroid is extremely rare (0.2-0.5%).

- Most common Fibroid to undergo malignant change is intramural followed by submucous.°
- Seen in postmenopausal or permenopausal females of 40 years of age.
- Features suggestive of malignancy :
 - Sudden increase in size of fibroid
 - Fibroid becomes tender and painful
 - Post menopausal bleeding
 - Systemic upset and pyrexia may be present

Extra Edge : **Specific features of different types of fibroid —**

Submucous	Intramural	Subserous
<ul style="list-style-type: none"> • Can cause abortions • Often associated with heavy menstrual bleeding menorrhagia & anemia • Inflammatory 	<p>Most common histologic type</p> <p>May cause</p> <ul style="list-style-type: none"> — 1st trimester bleeding — Abruptio placentae 	<ul style="list-style-type: none"> • Do not cause abortions • Present on the surface of uterus • Pressure effects on rectum / ureter (constipation,

- | | | |
|---|--|---|
| change + | — Obstructed labour | hydronephrosis) |
| • Malignant change ++ | — Preterm labour Uterine inertia Associated with | • Pedunculated & serous usually not cause anemia but torsion can occur° (wandering fibroid) |
| • Metrorrhagia can occur due to ulceration in submucous fibroid | menorrhagia Malignant change is most common in intramural type | • Fibrous / calcific / hyaline change+ Pseudo Meigs syndrome |
| Inversion (in fundal submucous fibroid) | | |
| Calcific degeneration (10%) | | |
| • Usually involves the subserous fibroids with small pedicle or myomas of postmenopausal women. It is usually preceded by fatty degeneration. | | |
| • There is precipitation of calcium carbonate or phosphate within the tumor. When whole of the tumor is converted into a calcified mass, it is called "womb stone". | | |

17. Red degeneration in a case of fibroid with pregnancy occurs most often during :

a) First trimester

b) Second trimester

c) Third trimester

d) Puperium

Correct Answer - B
Second trimester

18. In PCOD symptoms and signs seen are :

a) Amenorrhoea

b) Alopecia

c) Theca cell hyperplasia and Hyperandrogenism both

d) All are correct options

Correct Answer - D

Ans. is d i.e. All are correct options

Symptoms and signs of PCOD : **Menstrual dysfunction :**

In women with PCOS - Menstrual dysfunction ranges from amenorrhea to oligomenorrhea to episodic menometrorrhagia.

Endometrium in PCOD patients can be both thickened / thinned and atrophied depending on the predominance of hormone.

Under the influence of unopposed action

Under the

influence of Androgens of estrogen (due to anovulation)

Thickened unstable endometrium
endometrium

Thin, atrophied

Unpredictable bleeding pattern

Amenorrhea /

oligomenorrhea (menometrorrhagia)

Hyper androgenism : It is manifested clinically by

- Hirsutism (i.e. presence of coarse, dark terminal hair distributed in male pattern).
- Acne (Acne that is persistent or is late in onset) and / or°
- Androgenic **alopecia**.°

In contrast signs of virilisation such as increased muscle mass, deepening of the voice and clitoromegaly are not typical of PCOS. Virilisation reflects much higher androgen levels and should prompt investigation for an androgen producing tumor of ovary or the adrenal gland.°

Other endocrine dysfunction :

Other endocrine dysfunction .

- Insulin resistance.
 - Acanthisis Nigricans – Skin is characterised by thick, gray brown velvety plaques seen in areas of flexure like back of neck, axilla, crease beneath breast, waist and groin.
It occurs due to insulin resistance.
 - Impaired glucose tolerance and type 2 diabetes mellitus.
 - Dyslipidemia.
 - Obesity.
 - Obstructive sleep apnea.
 - Increased incidence of metabolic syndrome and cardiovascular disease. Metabolic syndrome characterised by insulin resistance, obesity atherogenic dyslipidemia and hypertension.
 - Increased incidence of endometrial hyperplasia and cancer.°
 - Infertility.°
 - Increased rate (30 - 50%) of early miscarriage°.
- Complications in Pregnancy – *Increased risk of* : - Gestational diabetes

To Brief up :

Consequences of PCOS

**Short term consequences
term consequences**

Long

- | | |
|---|---|
| <ul style="list-style-type: none">• Irregular menses• Hirsutims / Acne / Androgenic alopecia• Infertility• Obesity• Metabolic disturbances• Abnormal lipid levels / Glucose metabolism | <ul style="list-style-type: none">• Diabetes• Cardio vascular disease• Endometrial cancer |
|---|---|

19. Le Fort's operation is done in :

- a) Elderly menopausal patients with advanced prolapse
- b) Young woman suffering from second or third degree prolapse
- c) Women under 40 years who are desirous of retaining their menstrual and reproduction function
- d) Women over 40 years, those who have completed their families

Correct Answer - A
Elderly menopausal patients with advanced prolapse

20. In Fothergill's operation the following are undertaken EXCEPT :

a) Amputation of cervix

b) Anterior colporrhaphy

c) Colpoperineorrhaphy

d) Plication of round ligament

Correct Answer - D
Plication of round ligament

21. All are true regarding endometriosis, except :

a) Hormone dependent condition

b) Can involve lung. pleura

c) Contains clear fluid

d) Ovary is the most common site

Correct Answer - C

Ans. is c i.e. Contains clear fluid

As already explained in previous question, endometriosis is occurrence of functioning endometrial tissue (glands + stroma) outside the uterine cavity.

Whatever the initial genesis of endometriosis its further development depends mainly on estrogen (Option "a)

It can occur anywhere in body, Most common site being ovary° (Option "d").

Can also involve lungs and pleura° (Option "b").

– In endometriosis ovary contains tarry dark brown fluid (due to presence of blood pigments like hemosiderin) and cul de sac has yellow brown fluid.

Clear fluid is not seen anywhere. So, Option "c" is incorrect.

For more details about endometriosis, see answer 1

22. Scar endometriosis can occur following :

a) Classical Cesarean Section

b) Hysterotomy

c) Episiotomy

d) All of the above

Correct Answer - D

Ans. is d i.e. All of the above

Endometriosis sometimes occurs in abdominal wall scars following operations on uterus or tubes and is known as Scar endometriosis.

Operations most likely to be followed by scar endometriosis

- Hysterotomy° •
- Classical cesarean section° •
- Myomectomy° •
- Ventrofixation° •
- Following operations for section of Fallopian tube° •
- Following operations for removal of pelvic
• Episiotomy°
• endometriosis°

23. In endometriosis, cause of infertility is :

a) Immobility of tubes

b) Anovulation

c) Tubal block

d) A, B and C All Correct

Correct Answer - D
A, B and C All Correct
Infertility:

Male factor: 30%
Tubal, uterine & peritoneal factor: 25%
Ovarian factor: 25%
Cervical factor: 10%
Unexplained factor: 10%

**24. In the etiology of endometriosis
Sampson's theory is :**

a) Implantation theory

b) Coelomic metaplasia theory

c) Metastatic theory

d) Histogenesis by induction

Correct Answer - A
Implantation theory

25. Primary amenorrhoea with anosmia is seen in :

a) Kallman syndrome

b) Laurence moon Biedl syndrome

c) Foster - kennedy syndrome

d) Sheehan's syndrome

Correct Answer - A

Ans. is a i.e. Kallman Syndrome

Friends, you know the answer to this question quite well. Here I would like to point out that in solving PGME Questions of previous years, it is not only important to know the correct answer with its details, it is equally important to know the details of incorrect options (as Questions might be asked on these incorrect options in future).

So, let's know :

Laurence Moon Biedl Syndrome

It is an autosomal recessive disorder characterized by GnRH deficiency (hypogonadism) ($\text{FSH} < 40 \text{ mIU/ml}$) and associated with :

- Obesity
- Mental retardation
- Polydactyly
- Retinitis Pigmentosa

Sheehan's syndrome : Kindly see details from answer No. 5.

Foster Kennedy Syndrome : Do not get confused with this option : It is the same Foster Kennedy Syndrome as you have read in Ophthalmology, characterized by papilloedema in one eye and optic atrophy in the other. It results from raised intracranial pressure and simultaneous optic nerve compression secondary to tumor –

classically, a meningioma of the olfactory groove, or more commonly, due to meningioma of the sphenoid wing.

26. Causes of dysfunctional uterine bleeding can be:

a) Uterine polyp

b) Fibroid

c) Granulosa cell tumour

d) Irregular ripening of endometrium

Correct Answer - D

Ans. is d and e i.e. Irregular ripening of endometrium
Irregular ripening of the endometrium

- There is a poor formation and inadequate function of corpus luteum.
- Secretion of both progesterone and estrogen is inadequate to support the endometrial growth.
- *Slight bleeding occurs and continues prior to the start of proper flow*
- *The endocrine profile in the luteal phase shows persistent low level of urinary pregnanediol level of less than 3 mg or plasma progesterone level less than 5ng/mL.*
- *Endometrial study prior to or soon after spotting reveals patchy area of secretory changes amidst proliferative endometrium.*

DUB is defined as a state of abnormal uterine bleeding without any clinically detectable organic pelvic pathology.

DUB is of two types :

1. Anovulatory (80%)
2. Ovulatory (20%)

Anovulatory (80%) : • Threshold bleeding of puberty menorrhagia

- Metropathia hemorrhagica^o/cystic glandular hyperplasia^o
- **Premenopausal DUB** (Atrophy of endometrium).

Ovulatory (20%) :

- Irregular ripening°
- Irregular shedding°
- **IUCD insertion**
- Following sterilization operation.

27. All are causes of amenorrhoea EXCEPT :

a) Pituitary adenoma

b) Chronic nephritis

c) Tubercular endometritis

d) Adenomyosis

Correct Answer - D
Adenomyosis

28. Cryptomenorrhea occurs due to :

a) Imperforate hymen

b) Asherman's syndrome

c) Mullerian agenesis

d) All

Correct Answer - A
Imperforate hymen

29. Primary amenorrhea is when :

a) Menstruation does not occur even after 18 year

b) Menstruation does not occur even after 15 year of age

c) Imperforate hymen exists

d) None of the above

Correct Answer - B

Menstruation does not occur even after 15 year of age

30. A 50 year old woman, nulliparous, diabetic and obese presenting with post-menopausal bleeding likely diagnosis is :

a) Carcinoma in situ of cervix

b) Carcinoma endometrium

c) DUB

d) None of the above

Correct Answer - B

Ans. is b i.e. Carcinoma Endometrium

A 50 year old woman Nulliparous, Diabetic and obese (all predisposing factors for carcinoma Endometrium) is presenting with postmenopausal bleeding most common complaint in Ca endometrium). The most likely diagnosis is carcinoma endometrium.

Note-In older women endometrial cancer presents as :

- Postmenopausal bleeding
- Abnormal vaginal discharge

Extra Edge :

"Causes of Post Menopausal Uterine Bleeding with their frequency of occurrence."

Cause

- Endometrial atrophy

(MC)

- Estrogen

Replacement therapy

- Endometrial Polyps
- Endometrial

hyperplasia

- Endometrial cancer

60-80%

31. Polycystic ovarian disease is associated with :

a) Ovarian cancer

b) Endometrial carcinoma

c) Congenital adrenal hyperplasia

d) Vaginal carcinoma

Correct Answer - B
Endometrial carcinoma

32. Treatment of choice in a postmenopausal lady with atypical endometrial hyperplasia is ;

a) Estrogens

b) Hysterectomy

c) Progestogens

d) Radiotherapy

Correct Answer - B

Ans: B. Hysterectomy

Variable	Type I:	
	Endometrioid	Type II: Serous
Epidemiology	75% of endometrial cancers	25% of endometrial cancers
Etiology	Unopposed estrogen stimulation (e.g. tamoxifen use, exogenous estrogen-only therapy).	Unrelated to estrogen; the p53 mutation is present in 90% of cases.
Precursor lesion	Hyperplasia and atypical hyperplasia.	None
Mean age at diagnosis	55 years	67 years
Prognosis	Favorable	Poor



**33. Atypical endometrial hyperplasia
undergoes malignant transformation in :**

a) 10 %

b) 25%

c) 45 %

d) 70 %

Correct Answer - B
25%

34. True about Brenner tumo

a) Usually bilateral

b) Resembles fibroma

c) Common in postmenopausal age group

d) Option b and c both

Correct Answer - D

Ans. is b and c i.e. Resembles fibroma; and Common in postmenopausal age group

Brenner tumour is also called as Transitional cell tumour :

- It is a rare epithelial neoplasm of ovary resembling fibroma.°
- It is an essentially benign tumour.°
- Tumour is generally seen in women around menopause and is generally unilateral.°
- Cause menopausal bleeding and Pseudomeig syndrome (ascites and hydrothorax).°
- Malignant change is very rare.

Histologically it shows walthard cell rests of transitional cells°. cells have coffee bean nuclei. cut section is gritty.

35. True about Meig's syndrome ;

a) Lymphatic dysplasia

b) 2 - 30 years age

c) Associated with ascites and pleural effusion and No treatment required

d) None

Correct Answer - C

Ans. is c i.e. Associated with ascites and pleural effusion; and No treatment required

Ascites and right sided hydrothorax in association with fibroma of ovary is called as *Meig's syndrome*.

It can also be seen in Brenner's tumour and Granulosa cell tumour where it is called as *Pseudomeig's syndrome*.

- Hydrothorax can be bilateral also.

True meig's syndrome is rare, occurring in < 5 per cent of fibromas.

Ascites is caused by transudation of fluid from the ovarian fibroma. Hydrothorax develops secondary to flow of ascitic fluid into the pleural space via lymphatics of the diaphragm.

Ascites occurs (*in 50% cases*) when tumour size is > 6 cms.

Tumours producing Meig's syndrome manifest in *the late childbearing period i.e., 30 - 40 years*. Both ascites and hydrothorax resolve spontaneously after removal of the tumour.

Criteria for diagnosis of Meig's syndrome :

Tumour must be ovarian, solid and benign.

Both hydrothorax and ascites must be present.

Removal of the tumour must result in their spontaneous and permanent cure

permanent cure.

Pseudo-meigs syndrome :

- Can be seen in association with either benign or malignant tumour.
- Hydrothorax could be a manifestation of pulmonary metastasis.
- Syndrome can result from overstimulation of the ovaries with gonadotropins but, in such cases, the peritoneal exudate is more likely to be caused by an electrolyte imbalance rather than by ovarian tumour.

36. All of the following are true about Krukenberg's tumor except :

a) Has a rough surface

b) Shape of ovary is maintained

c) Usually bilateral

d) Arises usually from stomach carcinoma

Correct Answer - A

Ans. is a i.e. Has a rough surface

Krukenberg tumour :

- Krukenberg tumour by definition **represent carcinoma of stomach metastasised to ovary**. But the eponym is commonly used to **denote any gastric cancer metastatic to ovary**
- Tumour arise by *retrograde lymphatic spread*° i.e. carcinoma cells pass from the stomach to the superior gastric lymphnode which also receive lymphatics from ovary.

Characteristics of Krukenberg **Tumour** :

1. Always bilateral°
2. Have smooth surface°
3. No tendency to form adhesions
4. Freely mobile
5. No infiltration through the capsule.
6. Histologically tumour has signet ring cells in the background of myxomatous stroma.
7. They retain the shape of normal ovary.°
8. Have waxy consistency.°

First Type

- They are metastatic tumors from Intestine, Gall bladder, pancreas, corpus, and cervix.

- They are most commonly bilateral.
- They have irregular surface
- The method of ovarian infiltration is by surface implantation or retrograde implantation

Second Type (*Krukenberg Tumour*)

- They are metastatic tumors from stomach (70%), large bowel (15%) and breast (6%).
- They are always bilateral.°
- They have a smooth surface which may be slightly bossed.
- Always arise by retrograde lymphatic spread.

Extra edge :

Immunochemistry can help to distinguish between a primary mucinous ovarian and a metastatic colon Ovarian tumour is expected to stain positive for cytokeratin 7(CK7) and negative for CK 20. In contrast a metastasis lesion from a primary mucinous adenocarcinoma of colon is likely to show reverse pattern.

37. The pseudomyxoma peritonei occurs as a complication of the following ovarian tumours :

a) Serous cyst adenoma

b) Mucinous cyst adenoma

c) Dysgerminoma

d) Gonadoblastoma

Correct Answer - B

Ans. is b i.e. Mucinous cyst adenoma

Pseudomyxoma peritonei is a condition in which the neoplastic epithelium secretes large amounts of gelatinous mucinous material.

It is most commonly seen secondary to :

- Ovarian mucinous carcinoma; mucinous cystadenoma.
- Appendicular carcinoma (*well differentiate carcinoma*).
- Mucocoele of appendix (less commonly seen)

Even after removal of the ovarian tumours, these cells continue to secrete mucin.

Tendency of *recurrence* is present.

Prognosis is Poor.

Management : Hysterectomy with BSO with removal of mucin peritoneal implants along with appendix.

38. Find the wrong match :

a) Brenner's tumor - puffed wheat nuclei

b) Krukenberg tumor - Signet ring appearance

c) Granulosa cell tumor - Cell exner bodies

d) Gonadoblastoma - Reinke's crystals

Correct Answer - D
Gonadoblastoma - Reinke's crystals

39. True about carcinoma vulva

a) Spreads to superficial inguinal nodes and Radiotherapy given

b) Spreads to iliac nodes

c) Seen after menopause and Viral predisposition

d) All

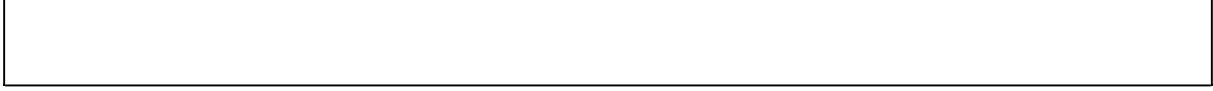
Correct Answer - D

Ans. is a, b and c i.e. Spreads to superficial inguinal nodes: Spreads to iliac nodes: Seen after menopause; Viral predisposition; and Radiotherapy given Vulva) cancer :

- 2 - 4% of all malignancies of female genital tract.
- Age : occurs in 6th or 7th decade.
- Most common histologic type is epidermoid cancer (squamous cell CA)
- Nulliparous, women of low parity are predisposed to vulva, CA.
- The etiology is same as of carcinoma in situ cervix (that is viral predisposition by viruses - **HIV, HPV, HSV-I1**).
- Most common site – Labium majora followed by clitoris and labium minora.
- Associated with cervical and ovarian CA in 20% case.
- Presents with pruritus, vulva! swelling, lump or ulcer.
- **Spread of tumor** – mainly by direct spread and lymphatics.
- *First superficial inguinal nodes are involved and then spreads to deep nodes and via glands of Cloquet to external iliac nodes, obturator and common iliac nodes in late stages.*

Treatment :

- *Early stages* : vulvectomy with inguinal nodes dissection.
- *Late stages* : chemotherapy and radiotherapy.



40. Pearl's index indicates :

a) Malnutrition

b) Population

c) Contraceptive failure

d) LBW

Correct Answer - C

Ans. is c i.e. Contraceptive Failure

Pearl Index indicates the effectiveness of a contraceptive or it is an index of contraceptive failure.

- Oral contraceptive pills have least chances of pregnancy as they have minimum failure rate (evaluated by pearl index).

Contraceptive Method	Pearl Index (per HWY)
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<i>No method used</i>	80
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<i>Rhythm (calendar) Method</i>	24
---------------------------------	----

<i>Coitus interruptus</i>	18
---------------------------	----

<i>Male condoms</i>	2-14
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<i>Female condoms</i>	5-21
-----------------------	------

<i>Diaphragm</i>	12
------------------	----

<i>Vaginal sponge</i>	
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<i>Parous women</i>	20 - 40
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<i>Nulliparous women</i>	9-20
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<i>IUD</i>	0.5 - 2.0
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<i>Oral pill</i>	0.1 - 0.5
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<i>Centchroman (Saheli)</i>	1.83 - 2.84
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41. OCPs cause

a) Hepatic adenoma

b) Cancer Cervix

c) Hepatic vein thrombosis

d) All

Correct Answer - D

Ans. is a, b and c i.e. Hepatic adenoma; Cancer cervix; and Hepatic vein thrombosis

Lets, see the causes of Hepatic vein thrombosis (Budd-Chiari syndrome).

- Polycythemia rubra vera, Myeloproliferative syndromes, paroxysmal nocturnal hemoglobinuria
- OCP use
- Other hypercoagulable states
- Invasion of IVC by tumor, such as Renal cell or Hepatocellular Ca
- Idiopathic.

42. Yuzpe and Lance regimen for 'post — coital' contraception :

a) 100 mg of ethinyl oestradiol and 0.5 mg of levonoregestel initially followed by the same dose after 12 hours

b) Same as above but followed by same dose after 24 hours

c) Use of 150 mg of DMPA every 3 months

d) 200 mg NET — EN every 60 days

Correct Answer - A

100 mg of ethinyl oestradiol and 0.5 mg of levonoregestel initially followed by the same dose after 12 hours

43. IUCD is contraindicated in :

a) Anemia

b) Hypertension

c) Infection

d) All of the above

Correct Answer - C
Infection

44. IUCD with maximum incidence of ectopic pregnancy :

a) Progestasert

b) Lippes loop

c) Copper - T

d) Multiload device

Correct Answer - A
Progestasert

45. During pomeroy's method of female sterilization, which portion of tube is ligated :

a) Isthmus

b) Ampullary

c) Isthmo-ampullary

d) Cornual

Correct Answer - C
Isthmo-ampullary

46. During laparoscopy the preferred site for obtaining cultures in a patient with acute pelvic inflammatory disease is :

a) Endocervix

b) Pouch of Douglas

c) Endometrium

d) Fallopian tubes

Correct Answer - D

Ans. is d i.e. Fallopian tube

- *Laparoscopic visualization of the pelvis is the most accurate method of confirming diagnosis of an acute PID.*
- However, it is not practical to advise diagnostic laparoscopy to all patients of PID,
- Indications of Laparoscopy in Acute PID :
 - Patients not responding to therapy, in order to confirm the diagnosis.
 - To obtain cultures from cul-de-sac or fallopian tube.
 - To drain pus. if necessary.

Thus, cultures can be obtained from both cul-de-sac and fallopian tube.

Telinde's Operative Gynae. 9/e, p 679 further says

"Laparoscopy is an excellent means of obtaining cultures directly from the tubes." My answer to this question is *Fallopian tube*. You can have your opinion.

47. Post menopausal bleeding is most commonly due to :

a) Carcinoma cervix

b) Fibroid

c) Endometriosis

d) Genital TB

Correct Answer - A
Carcinoma cervix

48. Cause of unilateral dysmenorrhea :

a) One horn of malformed uterus

b) Endometriosis with unilateral distribution

c) Small fibroid at the utero tubal junction

d) All of the above

Correct Answer - D
All of the above

49. All are indications of intra uterine insemination EXCEPT:

a) Viscid cervical mucus

b) Oligozoospermia

c) Tubal blockade

d) Immune factor of sperms

Correct Answer - C

Tubal blockade REF: A handbook of intrauterine insemination by Godwin Ikechukwu Meniru, Peter R. Brinsden, Ian Logan Craft Page 4

Indications of intrauterine insemination:

1. Ejaculatory failure (neurogenic, psychogenic, hypospadias, retrograde ejaculation)
2. Cervical factor (poor cervical mucus, cervical mucus hostility)
3. Male subfertility (oligozoospermia, asthenozoospermia, teratozoospermia)
4. Immunological (male/female antisperm antibodies)
5. Endometriosis
6. Idiopathic
7. Combined factors

50. All of the following are true about MRKH (Mayer – Rokitansky – Kuster – Hauser) syndrome except

a) Absent uterus

b) Absent cervix

c) Absent ovary

d) Absent vagina

Correct Answer - C

Absent ovary [Ref.- Spheroff 7^h/e p 420-21]

- *Mayer Rokitansky kuster Hauser syndrome consists of vaginal aplasia with other mullerian (paramesonephric duct) abnormalities. In females the paramesonephric duct (mullerian duct) Rives origin to ?*
 - Upper part of vagina
 - Uterus
 - Fallopian tubes
- *Thus ideally Meyer Rokitansky kuster hauser syndrome should be characterized by the complete absence of uterus, ovarian tubes and vagina.*
- *But it is seen that vaginal absence is the only consistent feature and uterus can be absent or present in rudimentary, form.*
- *Patient usually presents with anomalies of the genital tract which range from upper vaginal atresia to total mullerian agenesis i.e. absent vagina, uterus and fallopian tubes.*
- *Ovaries remains unaffected in this syndrome because ovaries originate within the primitive ectoderm, independent of the*

mesonephros. Because ovarian function is normal, the patient experiences all bodily changes associated with menstruation and puberty.

Features of Meyer Rokitansky kuster Hauser (Mullerian av, enesis syndrome)

- Sporadic inheritance
- Karyotype 46xx
- Normal breast development°
- *Normal (adie)) and pubic hair*
- Uterus absent°
- Vagina absent°
- Cervix absent°
- Ovary nonnal°
- Testosterone (female levels)
- Associated anomalies
- *The presentation of complete mullerian agenesis (Meyer Rokitansky kuster Hauser syndrome) may be confused with androgen insensitivity syndrome.*

- In androgen insensitivity syndrome a patient has XY karyotype and functioning testes however, the body cannot respond to testosterone due to mutations in the androgen receptor.

- These two syndromes are compared below

	Comparison of Mullerian agenesis and Androgen insensitivity syndrome	
Presentation	Mullerian agenesis	Androgen insensitivity
• Inheritance pattern	Sporadic	X-linked recessive
• Karyotype	46xx	46xy
• Breast development	Yes	Yes
• Axillary and pubic hair	Yes	No
• Uterus	No	No
• Gonad	Ovary Female	Testis

• Testosterone	levels	Male levels
• Associated anomalie	Yes	No

51. Which of the following is the largest and most important muscle in the pelvic floor?

a) Coccygeus

b) External anal sphincter

c) Levator ani

d) Obturator internus

Correct Answer - C

Ans. C. Levator ani

- The pelvic floor is formed by the large levator ani (with parts including the pubococcygeus, puborectalis, and iliococcygeus) and the much smaller coccygeus.
- Internal rotation of fetal head occurs when the fetal head touches the pelvic floor (levator ani muscle).
- The movement involves the gradual turning of the occiput from its original position anteriorly toward the symphysis pubis.
- The main purpose of internal rotation is to place the occiput behind the pubic symphysis.

Theories which explain the anterior rotation of the occiput:

1. Hart's rule: The part of the fetal skull which presses on the levator ani muscle is pushed anteriorly with each recoil.

2. Pelvic shape: Pelvic outlet is greater in AP diameter. Hence, the head tries to accommodate in the maximum available diameter.

Ref: Hoffman B.L., Schorge J.O., Schaffer J.I., Halvorson L.M., Bradshaw K.D., Cunningham F.G., Calver L.E. (2012). Chapter 38. Anatomy. In B.L. Hoffman, J.O. Schorge, J.I. Schaffer, L.M. Halvorson, K.D. Bradshaw, F.G. Cunningham, L.E. Calver (Eds), Williams Gynecology, 2e.

52. The muscle that is most often injured by a tear of the perineum is innervated by which of the following?

a) Inferior gluteal nerve

b) Pelvic splanchnic nerve

c) Posterior femoral cutaneous nerve

d) Pudendal nerve

Correct Answer - D

The **pudendal nerve** (from S2-S4) is the principal nerve to innervate structures of the perineum, including sensory innervation to the genitalia, and motor innervation to muscles of the perineum, the external urethral sphincter, and the external anal sphincter.

This innervation may have clinical significance, as babies can also have uterine prolapse, which can be due either to congenital weakness in the pelvic musculature or to defects in innervation.

The **inferior gluteal nerve** supplies the gluteus maximus.

The **pelvic splanchnic nerve** supplies the pelvic viscera via the inferior hypogastric and pelvic plexuses.

The **posterior femoral cutaneous nerve** supplies the skin of the buttock and upper portions of the medial and posterior aspects of the thigh.

Ref: Cunningham F.G., Leveno K.J., Bloom S.L., Hauth J.C., Rouse D.J., Spong C.Y. (2010). Chapter 2. Maternal Anatomy. In F.G. Cunningham, K.J. Leveno, S.L. Bloom, J.C. Hauth, D.J. Rouse, C.Y. Spong (Eds), *Williams Obstetrics*, 23e.

53. A 24 week pregnancy scan showed frontal facial fetal defects suggestive of Moebius syndrome. Which of the following could account for the teratogenic effects?

a) Mifepristone

b) Misoprostol

c) Dinoprostone

d) Methotrexate

Correct Answer - B

MOEBIUS SYNDROME:

- Moebius syndrome is a rare neurological disorder characterized by weakness or paralysis (palsy) of multiple cranial nerves, *most often the 6th (abducens) and 7th (facial) nerves*. Other cranial nerves are sometimes affected. The disorder is present at birth (congenital).
- The abnormalities and severity of Moebius syndrome vary greatly from one person-to-another.
- The classically accepted **diagnostic criteria** include:
 - 1) facial paralysis or weakness affecting at least one but usually both sides of the face (7th cranial nerve),
 - 2) paralysis of sideways (lateral) movement of the eyes (6th cranial nerve); and
 - 3) preservation of vertical movements of the eyes.
- Less often, other cranial nerves, including the 5^h, 8th, 9th, **10th**, 11th, and 12^h may be affected.
- Infants with Moebius syndrome may drool excessively and exhibit crossed eyes (strabismus). Because the eyes do not move from

side-to-side (laterally), the child is forced to turn the head to follow objects. Infants who lack facial expression often are described as having a "mask-like" face that is especially obvious when laughing or crying. Affected infants may also have difficulties feeding, including problems swallowing and poor sucking. Corneal ulceration may occur because the eyelids remain open during sleep.

MANAGEMENT:

Misoprostol is a methyl ester prostaglandin E1 analogue used for cervical ripening and first trimester abortion. The first trimester exposure to Misoprostol might lead to the development of *Moebius syndrome*.

Mifepristone (RU - 486) is a potent progesterone receptor antagonist which is used in first trimester abortion and as a post-coital contraceptive. The most common side effects are vomiting, giddiness, pain or cramps, weakness and headache.

Dinoprostone is a PGE2 analogue used in cervical ripening along with misoprostol. There exists a risk for the patient to develop uterine rupture.

Methotrexate is a analogue of folic acid and it prevents the synthesis of DNA by inhibiting the enzyme dihydrofolate reductase. It is used in medical termination of pregnancy, medical management of ectopic pregnancy, prophylactic chemotherapy of hydatidiform mole and also in the treatment of placenta accreta.

The commonly reported side effects are leukopenia, thrombocytopenia, bone marrow aplasia, ulcerative stomatitis, hemorrhagic enteritis, elevated liver enzymes, alopecia, pneumonitis and diarrhea.

Ref: Berek and Novak's Gynecology, Issue 935, Volume 2007 By Emil Novak, Page 622; Syndromes of the Head and Neck By Robert J. Gorlin, Meyer Michael Cohen, Raoul C. M. Hennekam, Page 826; Pediatric Ophthalmology, Neuro-Ophthalmology, Genetics: By Birgit Lorenz, Michael C. Brodsky, Pages 70-71; Merritt's Neurology By Lewis P. Rowland, Timothy A. Pedley,

54. A 55-year-old woman complains to a physician because she has been having chronic pelvic discomfort. On further questioning, she reports chronic lower back pain, constipation, difficulty with walking, and impaired coitus. Pelvic examination demonstrates that the uterine cervix lies low within the vaginal canal, but does not protrude through the introitus. For minor degrees of this patient's disorder, Kegel exercises are sometimes prescribed. These can be performed by asking the patient to do which of the following?

a) Close the glottis and increase abdominal pressure

b) Contract muscles to interrupt a stream of flowing urine

c) Press the knees together

d) Tense the buttocks

Correct Answer - B

The Kegel exercises are specifically designed to contract the pubococcygeus muscle, and can be performed by interrupting the flow of urine. Patients with minor degrees of **prolapse** may also be treated with a pessary, which is a small object placed in the vagina that serves as a mechanical support for the uterus.

Estrogen therapy is also of some help in some patients. Severe degrees of prolapse may require either hysterectomy or surgical strengthening of the pelvic floor. First choice describes the Valsalva maneuver, which these patients should not do, because it increases intra-abdominal pressure and may worsen the prolapse. (They should also avoid lifting heavy objects for the same reason).

55. Which of the following condition is associated with dysfunctional uterine bleeding?

a) Metropathia haemorrhagica

b) Polycystic ovary

c) Endometrial TB

d) Hypothyroidism

Correct Answer - A

Metropathia haemorrhagica is a condition associated with cyclic endometrial hyperplasia and is the best documented type of dysfunctional uterine bleeding.

In this, ovary is refractory to normal levels of pituitary gonadotropins, the follicles ripen but do not rupture and the endometrium become hyperplastic under persistent oestrogenic stimulation.

Patient develop heavy painless hemorrhage after a variable duration of amenorrhea when the exuberant endometrium is shed as relative estrogen deficiency occur.

Dysfunctional uterine bleeding is defined as: Abnormal vaginal bleeding not associated with any demonstrable pathology.

Aetiologic classification:

Ovular:

- Functional epimenorrhea
- Ovulation
- Functional menorrhagia

Anovular

- Metropathia haemorrhagica
- Threshold bleeding

Ref: Gynaecology and Obstetrics By Balaram Jana page 43.

56. In which of the following infection 'strawberry cervix' is seen?

a) *Trichomonas vaginalis*

b) Chlamydia

c) *Candida albicans*

d) Herpes simplex

Correct Answer - A

Multiple punctuate spot on the cervix gives it the appearance of a strawberry hence called so.

This is due to capillary dilation as a result of the inflammatory response to ***Trichomonas vaginalis***.

Classically, with a cervical smear, infected women have a transparent "halo" around their superficial cell nucleus.

T. vaginalis was traditionally diagnosed via a wet mount, in which "corkscrew" motility was observed.

57. All the following are vaginal procedures done for urinary incontinence, EXCEPT:

a) Transobturator tape

b) Anterior colporrhaphy

c) Marshall - Marchetti - Krantz procedure

d) Kelly's stitch

Correct Answer - C

In Marshall - Marchetti - Krantz procedure the paraurethral tissue at the level of the bladder neck is sutured to the periosteum of the posterior surface of the pubic symphysis. It is an abdominal procedure.

Also know

Burch colposuspension - Paraurethral tissue is sutured to the iliopectineal ligament.

Ref: Essentials of Gynaecology by Lakshmi Seshadri, Edition 1, page - 341.

58. A young female is suggested for doing laparoscopy for finding out the tubal factors for her infertility. Hysterosalpingography was done 6 months before which was appeared normal. Regarding laparoscopy in this patient consider the following:

Assertion: Ideal time for doing laparoscopy in this patient is during proliferative phase

Reason: Recent corpus luteum can be visualized and endometrial biopsy can be taken within same sitting.

a) Both Assertion and Reason are true, and Reason is the correct explanation for Assertion

b) Both Assertion and Reason are true, and Reason is not the correct explanation for Assertion

c) Assertion is true, but Reason is false

d) Assertion is false, but Reason is true

Correct Answer - D

Laparoscopic and dye test are done during secretory phase of the cycle for finding out the tubal factors of infertility.

Laparoscopy chromotubatioz: Best confirmatory and gold standard investigation to assess tubal patency

Ref: Textbook of Gynaecology By D.C.Dutta, 4th Edition, Page 224, 226.

59. A female developed ovarian hyperstimulation syndrome during the treatment of infertility. What is the MOST common cause of ovarian hyperstimulation?

a) FSH/LH therapy

b) GnRH drugs

c) Clomiphene

d) Danazol

Correct Answer - A

Ovarian hyperstimulation syndrome (OHSS):

- It is a clinical symptom complex associated with ovarian enlargement resulting from exogenous gonadotropin therapy.
- **Symptoms** may include abdominal pain and distension, ascitis, gastrointestinal problems, respiratory compromise, oliguria, hemoconcentration, and thromboembolism.
- These symptoms may develop during ovulation induction or in early pregnancies that were conceived through exogenous ovarian stimulation.

Ref: Hoffman B.L., Schorge J.O., Schaffer J.I., Halvorson L.M., Bradshaw K.D., Cunningham F.G., Calver L.E. (2012). Chapter 20. Treatment of the Infertile Couple. In B.L. Hoffman, J.O. Schorge, J.I. Schaffer, L.M. Halvorson, K.D. Bradshaw, F.G. Cunningham, L.E. Calver (Eds), Williams Gynecology, 2e.

60. Which of the following modalities have shown best result for Pre Menstrual Syndrome?

a) SSRI

b) Progesterone

c) Oestrogen

d) Anxiolytics

Correct Answer - A

Out of the given modalities of treatment, the Selective Serotonin Receptor Inhibitors (SSRI's) has shown good results in alleviating the symptoms of Pre Menstrual Syndrome (PMS).

Ref: Shaw's Textbook of Gynaecology; 13th edition, Pages 289-90; Assessment and Therapy by Howard S. Friedman, Pages 252-60

61. A lady presented with secondary amenorrhea 6 months after having an abortion. Her FSH levels were measured as 6 mIU/ml what is the most probable diagnosis:

a) Pituitary failure

b) Ovarian failure

c) Fresh pregnancy

d) Uterine synechiae

Correct Answer - D

Since the lady in the question is having secondary amenorrhea following an abortion, uterine synechiae is the most likely cause. Low normal FSH level is consistent with uterine abnormality. (Normal serum FSH value in adult is woman is 5-20 mIU).

Ref: Novak's, 14th Edition, Chapter 27; Speroff, 7th Edition, Chapter 11; Shaw's, 14th Edition, Pages 263, 264; The Subfertility Handbook : A Clinician's Guide By Gab Kovacs, 2nd Edition, Page 117

62. Contraceptive LNG-IUD (levonorgesterol intra-uterine device) has the cumulative pregnancy rate at 5 yrs of:

a) 0.5

b) 1.0

c) 1.5

d) 2.0

Correct Answer - A

Cumulative 5-year pregnancy rate for LNG-IUD (levonorgestrel intra-uterine device) is 0.5 %.

Ref: Textbook of Gynaecology Edited By Shaw, Soutter, Stanton, 2nd Edition, Page 399 ; Clinical Gynecologic Endocrinology and Infertility By Marc A. Fritz, Leon Speroff, 2010, Page 1386 ; Textbook Preventive Social Medicine Park, 19th Edition, Page 395

63.

Which part of the fallopian tube is the most common site for female tubal sterilization?

a) Cornua

b) Ampulla

c) Isthmus

d) Infundibulum

Correct Answer - C

Most common site for female tubal sterilization is isthmus.

Isthmus is the part of the fallopian tube which is cut or sealed in a tubal ligation or sterilization procedure.

In the bipolar electrocoagulation technique, the mid isthmic portion of the tube is grasped and radiofrequency electric current is applied to three adjacent areas and coagulating 3 cm of tube.

The Hulka clips are also placed across the mid isthmus.

Ref: Maternal and Child Health Nursing: Care of the Childbearing and Childrearing By Adele Pillitteri, page 93

64. A 27 year old obese woman is presenting with oligomenorrhoea, infertility and hirsutism. What is the most likely diagnosis?

a) Polycystic ovaries

b) Endometriosis cystic ovaries

c) Pelvic inflammatory disease

d) Turner's syndrome

Correct Answer - A

PCOS is a syndrome manifested by amenorrhea, hirsutism and obesity associated with enlarged polycystic ovaries.

Patients presents with obesity, hirsutism, oligomenorrhea or amenorrhea and infertility. Investigations reveals LH:FSH >3:1, reduced level of SHBG and sex hormone binding globulin, elevated levels of androstenedione and serum insulin level, marginally elevated levels of serum testosterone and DHEAS. Transvaginal ultrasonography shows enlarged ovary with peripherally arranged cysts.

Ref: Textbook of Gynecology By DC Dutta, 4th Edition, Pages 285, 405, 421-3

65. The true regarding adenomyosis is:

- a) More common in nullipara
- b) Progestins are the agents of choice for medical management
- c) Presents with menorrhagia, dysmenorrhia, and an enlarged uterus
- d) More common in young women

Correct Answer - C

Adenomyosis is a condition characterized by the presence of ectopic glandular tissue found in muscle.

It usually refers to ectopic endometrial tissue (the inner lining of the uterus) within the myometrium (the thick, muscular layer of the uterus).

The condition is typically found in women between the ages of 35 and 50. Patients with adenomyosis can have dysmenorrhea & menorrhagia. In adenomyosis, basal endometrium penetrates into hyperplastic myometrial fibers.

Therefore, unlike functional layer, basal layer does not undergo typical cyclic changes with menstrual cycle. Ref: Current Obstetrics and Gynecology By Gita Ganguly Mukherjee, Sudip Chakravarty, Bhaskar Pal, et al, Jaypee Brothers, Medical Publishers, 2007, Page 274

66. The symptoms of menopause are best treated with:

a) Oestrogen

b) Progesterone

c) Testosterone

d) Clomiphene

Correct Answer - A

Symptoms of menopause are best treated with oestrogen. Oestrogen has been found to be effective in the prevention of osteoporosis, treatment of vasomotor symptoms, and treatment of vulvovaginal atrophy.

Complications associated with use of estrogen are:

- Endometrial Cancer: estrogen stimulation of the endometrium, unopposed by progesterone, causes endometrial proliferation, hyperplasia, and, finally, neoplasia.
- Breast Cancer
- Thromboembolic Disease
- Stroke
- Uterine Bleeding
- Gallstone disease
- Generalized edema, mastodynia and breast enlargement

Contraindications of estrogen replacement therapy:

- Undiagnosed abnormal vaginal bleeding
- Suspected, or history of cancer of the breast
- Suspected estrogen-dependent neoplasia
- Active deep vein thrombosis
- Pulmonary embolism

- History of these conditions:arterial thromboembolic disease (myocardial infarction, stroke); liver dysfunction or disease.
Ref: Nathan L. (2013). Chapter 59. Menopause & Postmenopause. In A.H. DeCherney, L. Nathan, N. Laufer, A.S. Roman (Eds), *CURRENT Diagnosis & Treatment: Obstetrics & Gynecology*, 11e.

67.

A 55 year old lady presenting to out patient department with postmenopausal bleeding for 3 months has a 1 x 1 cm nodule on the anterior lip of cervix. Which of the following is the most appropriate investigation to be done subsequently in this care?

a) Pap smear

b) Punch biopsy

c) Colposcopy

d) Endocervical curettage

Correct Answer - B

Most appropriate investigation which can be done in the OPD in this patient who has a visible 1 x 1 cm nodule on the anterior lip of cervix is **punch biopsy**.

*For non-visible lesions **colposcopy** allows accurate delineation of suspicious areas for tissue biopsy.*

Ref: Shaw's Textbook of Gynaecology, 13th Edition, Page 384

68. All of the statements regarding progesterone only pill are true, except

a) Inhibits ovulation

b) Failure rate is the same as combined OCP

c) Irregular bleeding is a known complication

d) Acts by altering the cervical mucous

Correct Answer - B

Failure rate of combined OCP is 0.2/100 women years, whereas failure rate of progesterone only pill is about 0.5 - 2 per 100 women years of use.

Progesterone only pill acts by thickening cervical mucous, causing atrophy of endometrium or by inhibiting ovulation.

69. Pearl index is used to calculate:
March, September 2009

a) Accidental pregnancies

b) Population

c) Fertility rate

d) Abortions

Correct Answer - A

Ans. A: Accidental Pregnancies

Methods of contraception are compared by the Pearl index. A high Pearl index stands for a high chance of unintentionally getting pregnant; a low value for a low chance.

The Pearl index will be determined by the number of unintentional pregnancies related to 100 women years. E.g. 100 women can contracept for 1 year each with the method that is going to be examined. If three pregnancies occur during this period in this group, the Pearl index will be 3.0.

**70. Gold standard investigation in diagnosing
PID is:
*March 2005***

a) Anti chlamydial Ab

b) Laparoscopy

c) USG

d) Blood leucocyte count

Correct Answer - B

Ans. B: Laparoscopy

Investigations in a case of PID:

- Physical examination
- Pregnancy test (to rule out anectopic pregnancy)
- White blood cell test (to rule out appendicitis)
- Genital culture (to look for gonorrhoea and chlamydia).
- An endometrial biopsy (tissue sample removed from the endometrium)
- Sonogram (if abscesses are suspected)
- Culdocentesis (fluid sample taken from uterine sac)
- Laparoscopy are done.

Laparoscopy is considered the "gold standard" for diagnosis of PID, because it allows visualization of the pelvic organs. The procedure involves inserting a tiny, flexible lighted tube through a small incision just below the navel.

This procedure is recommended when results of the preliminary tests (physical exam, blood tests and cultures) are unclear.

**71. MC site of primary carcinoma in a case of
Krukenberg tumour is:
*March 2004***

a) Gall bladder

b) Stomach

c) Breast

d) Lung

Correct Answer - B
Ans. B i.e. Stomach

**72. Primary amenorrhoea is a feature of all
EXCEPT:
September 2012**

a) Turner's syndrome

b) Stein-Leventhal syndrome

c) Rokitansky-Kustner-Hauser syndrome

d) Kallman syndrome

Correct Answer - B
Ans. B i.e. Stein Leventhal syndrome

73. Main difference between anorexia nervosa and bulimia nervosa lies in:
March 2013

a) Symptomatology

b) Weight

c) Gender

d) Age

Correct Answer - B

Ans. B i.e. Weight

Anorexia nervosa and bulimia

- Both anorexia nervosa and bulimia are characterized by an overvalued drive for thinness and a disturbance in eating behavior.
- The main difference between diagnoses is that anorexia nervosa is a syndrome of self-starvation involving significant weight loss of 15 percent or more of ideal body weight, whereas patients with bulimia nervosa are, by definition, at normal weight or above.
- Bulimia is characterized by a cycle of dieting, binge-eating and compensatory purging behavior to prevent weight gain.
- Purging behavior includes vomiting, diuretic or laxative abuse.
- Excessive exercise aimed at weight loss or at preventing weight gain is common in both anorexia nervosa and in bulimia.

**74. Colposcopy is used to visualize all
except:
March 2005**

a) Upper 2/3rd endocervix

b) Lower 1/3rd endoCervix

c) Lateral fornix

d) Vault of vagina

Correct Answer - A

Ans. A: Upper 2/3rd endocervix

Colposcopy

- *Colposcopy includes gross visualisation of the vulva and vagina, examination of the cervix before and after application of acetic acid (common household vinegar) using colposcope.*
- *The colposcope consists of two parts:*
- *Stereoscope.*
- *Binocular microscope with built-in light source that magnifies the cervix 3 to 10 times.*
- *By varying magnifications, the examiner can identify abnormal tissue from surrounding normal tissue.*
- *It is equipped with a green filter to filter out red, thereby enhancing the vascular appearance of the cervix by the vascular appearance of the cervix by making the vessels dark.*
- *Used to diagnose cervical cancer, usually after an abnormal Pap smear.*
- *Cervical biopsy allows for histologic evaluation of any abnormal lesions visualised.*

Purpose of the examination:

- *Grade the lesion.*
- *Determine its size and location.*
- *Exclude invasive cancer by fully visualising the area at risk.*
- *Excise any suspicious lesions for biopsy.*

**75. All of the following are advantages of laparoscope assisted vaginal hysterectomy (LAVH) over abdominal hysterectomy except:
March 2011**

a) Less peritoneal adhesions postoperatively

b) Short hospital stay

c) Less postoperative pain

d) Scope of wide exploration of the abdominal and pelvic organs

Correct Answer - D

Ans. D: Scope of wide exploration of the abdominal and pelvic organs

Advantages of laparoscopy over laparotomy includes **1)** reduced pain and quick recovery, **2)** short hospital stay and **3)** less peritoneal adhesions postoperatively

Vaginal hysterectomy

- First clamp includes uteroscaral & Macenrodt's ligament
- Second clamp includes uterine artery
- Third clamp includes cornual structures
- In abdominal hysterectomy it will be in the reverse order of the above & hence round ligament & cornual structures are clamped first.

76. Hysteroscopy is indicated in all of the following except:
March 2011

a) Asherman syndrome

b) Infertility

c) Misplaced intrauterine devices

d) Active pelvic infection

Correct Answer - D

Ans. D: Active pelvic infection

Genital tract infection is a contraindication to hysteroscopic therapeutic procedures

77. After first meiotic division, the primary oocyte remains arrested in ?

a) Diplotene stage

b) Pachytene stage

c) Metaphase

d) Telophase

Correct Answer - A

Ans. is 'a' i.e., Diplotene stage

- Oogenesis refers to the process of formation of ova from the primitive germ cells. Unlike fetal testis (in which spermatogenesis begins at puberty), the fetal ovary begins oogenesis by 10 weeks of gestation.
- **The sequence of events in oogenesis are :**
 - i. The primitive germ cells undergo mitotic divisions to form *oogonia* (*diploid cells*). *Oogonium is unique in that it is the only female cell in which both X' chromosomes are active.*
 - i. The oogonia proliferate by mitosis to form primary oocytes (diploid cells).
 - i. Primary oocytes formed from the oogonia enter a prolonged prophase (diplotene stage) of the first meiotic division and remain in this stage until ovulation occurs after puberty.
 - i. Primary oocytes *completes the first meiotic division* at puberty just before ovulation to form secondary oocyte (haploid cell) and 1st polar body.
 - i. Secondary oocyte immediately begins *second meiotic division* but this division stops at metaphase and is completed only if the mature ovum (ootid) is fertilized with sperm. At that time second polar body (polocyte) is extruded and the fertilized ovum proceeds to form a

new individual. *Fertilization normally occurs in the ampulla of fallopian tube.*

78. Mechanism of action of oral contraceptive pill can be all except ?

a) Hostile to sperm penetration

b) Anovulatory cycle

c) Failure of blastocyst implantation

d) Blockade of fimbrial ostia

Correct Answer - D

Ans. is 'd' i.e., Blockade of fimbrial ostia

Mechanism of action of OCPs

1. Inhibition of gonadotropin release from pituitary by reinforcement of normal feedback inhibition → No preovulatory LH surge → No ovulation
This is the most important mechanism.
2. Thickening of cervical mucus secretion (due to progesterone) → hostile to sperm penetration.
3. Even if ovulation and fertilization occur, the blastocyte fails to implant because endometrium is either hyperproliferative or hypersecretory - not suitable for nidation → Important in case of postcoital pill.
4. Uterine and tubal contractions may be modified to disfavour fertilization.
5. Postcoital pills may dislodge a just implanted blastocyte or may interfere fertilization/implantation.

79. Acrosome cap of sperm is derived from ?

a) Golgi body

b) Mitochondria

c) Nucleus

d) Centromere

Correct Answer - A

Ans. is 'a' i.e., Golgi body

Formation of acrosome starts with the coalescence of a series of granules from the Golgi complex, which migrates to come into contact with nuclear membrane, where it covers like a cap-like structure over 30% to 50% of nuclear surface.

The acrosome covers the nucleus and contains the hydrolytic enzymes necessary for fertilization.

'The head also contains the acrosome, which is a cap-like structure represented by golgi complex and covers about two thirds of anterior head area' Clinical reproductive medicine.

80. Two cell two gonatotropin hypothesis is ?

a) FSH & LH inhibits the release of estrogen and progesterone

b) FSH acts on granulosa cell and LH on theca cells

c) FSH stimulates estrogen while LH inhibits estrogen

d) FSH feedback inhibits hypothalamus, while LH feedback inhibits pituitary

Correct Answer - B

Ans. is 'b' i.e., FSH acts on granulosa cell and LH on theca cells

The "*Two-cell, two-gonadotropin*" theory proposes that two cells (i.e. theca cells and granulosa cells) and the two gonadotropins (i.e. FSH and LH) stimulate estrogen synthesis.

i) FSH stimulate granulosa cells to secrete estrogen.

ii) LH helps indirectly in secretion of estrogen. LH stimulates theca interna cells to increase the synthesis of androgens which are taken up by granulosa cells and converted to estrogen by aromatase.

81. Primary spermatocytes, chromosome is ?

a) 23-X

b) 23-Y

c) 46-XY

d) None

Correct Answer - C
Ans. is 'c' i.e., 46-XY

82. In early phase division of spermatogonia by?

a) Meiosis

b) Mitosis

c) Both Meiosis & Mitosis

d) Maturation

Correct Answer - B
Ans. is 'b' i.e., Mitosis

83. Alpha chain of HCG is identical to all except ?

a) LH

b) TSH

c) FSH

d) ACTH

Correct Answer - D

Ans. is 'd' i.e., ACTH

Human chorionic gonadotropin (HCG)

- HCG is a placental hormone.
- It is synthesized by the syncytiotrophoblastic cells of the placental villi
- It is a glycoprotein
- It is a dimer and has two dissimilar subunits
- .. *α Subunits*
- ?. *β Subunits*
- *But only the β subunit of HCG is typically measured as a tumour marker because of specificity of the β subunit*
- The β subunit of HCG has unique sequences that are not shared with other human glycoprotein hormones.
- It is detected by radioimmunoassay using antibodies to the β chain.
- HCG is not used as tumour marker because a unit of the FSH, LH and TSH are identical
- So there can be cross reactivity between a subunits of these hormone.
- That is why in case of testicular tumours the patients also undergo simultaneous assay of LH to be certain that the marker detected is β HCG.



**84. Treatment of carcinoma Cervix stage IIIB
include:**

a) Wertheim's hysterectomy

b) Schuata's hysterectomy

c) Chemotherapy

d) Concurrent chemoradiation

Correct Answer - D
Ans. d. Concurrent chemoradiation

Treatment Options by Stage

Carcinoma in Situ (Stage 0)

- Conization, such as cold-knife conization, loop electrosurgical excision procedure(LEEP), or laser surgery.
- Hysterectomy for women who cannot or no longer want to have children. This is done only if the tumor cannot be completely removed by conization.
- Internal radiation therapy for women who cannot have surgery.

Stage IA Cervical Cancer

Treatment for stage IA1 may include the following:

- Conization.
- Total hysterectomy with or without bilateral salpingo-oophorectomy.

Treatment for stage IA2 may include the following:

- Modified radical hysterectomy and removal of lymph nodes.
- Radical trachelectomy.
- Internal radiation therapy for women who cannot have surgery.

Stages IB and IIA Cervical Cancer

- Radiation therapy with chemotherapy given at the same time.
- Radical hysterectomy and removal of pelvic lymph nodes with or without radiation therapy to the pelvis, plus chemotherapy.
- Radical trachelectomy.
- Chemotherapy followed by surgery.
- Radiation therapy alone.

Stages IIB, III, and IVA Cervical Cancer

- Radiation therapy with chemotherapy given at the same time.
- Surgery to remove pelvic lymph nodes followed by radiation therapy with or without chemotherapy.
- Internal radiation therapy.
- A clinical trial of chemotherapy to shrink the tumor followed by surgery.
- A clinical trial of chemotherapy and radiation therapy given at the same time, followed by chemotherapy.

Stage IVB Cervical Cancer

- Radiation therapy as palliative therapy to relieve symptoms caused by the cancer and improve quality of life.

- Chemotherapy and targeted therapy.
- Chemotherapy as palliative therapy to relieve symptoms caused by the cancer and improve quality of life.
- Clinical trials of new anticancer drugs or drug combinations.

Treatment Options for Recurrent Cervical Cancer

- Immunotherapy.
- Radiation therapy and chemotherapy.
- Chemotherapy and targeted therapy.
- Chemotherapy as palliative therapy to relieve symptoms caused by the cancer and improve quality of life.
- Pelvic exenteration.
- Clinical trials of new anticancer drugs or drug combinations.

Cervical Cancer During Pregnancy

Carcinoma in Situ (Stage 0) During Pregnancy

Usually, no treatment is needed for carcinoma in situ (stage 0) during pregnancy. A colposcopy may be done to check for invasive cancer.

Stage I Cervical Cancer During Pregnancy

Pregnant women with slow-growing stage I cervical cancer may be able to delay treatment until the second trimester of pregnancy or after delivery.

Pregnant women with fast-growing stage I cervical cancer may need immediate treatment. Treatment may include:

- Conization.
- Radical trachelectomy.

Women should be tested to find out if the cancer has spread to the lymph nodes. If cancer has spread to the lymph nodes, immediate treatment may be needed.

Stage II, III, and IV Cervical Cancer During Pregnancy

- Chemotherapy to shrink the tumor in the second or third trimester of pregnancy. Surgery or radiation therapy may be done after delivery.
- Radiation therapy plus chemotherapy. Talk with your doctor about the effects of radiation on the fetus. It may be necessary to end the pregnancy before treatment begins.

85. In low ovarian reserve, anti mullerian hormone level will be:

a) <1

b) 1-4

c) >7

d) >10

Correct Answer - A

Ans. A. <1

AMH and ovarian reserve

- AMH of 1.0 has very poor ovarian reserve
- The central concept for the measurement of blood levels of AMH to determine ovarian reserve is this: women with lower AMH levels have a lower ovarian reserve than women with high AMH levels. AMH is currently being used by fertility specialists to help predict women who may respond poorly to fertility medications and in general, couples who are less likely to be successful with fertility treatment.

86. Premature ejaculation phase is seen in –

a) Excitement phase

b) Plateau phase

c) Orgasm phase

d) Refractory phase

Correct Answer - C

Ans. C. Orgasm phase

- The male sexual response is described as a sequence of phases including 4 stages: sexual desire, arousal, orgasm (ejaculation) and resolution.

The male sexual dysfunction usually occurs in one or more of the three first stages of the sexual response cycle, including:

- Dysfunctions of sexual desire (e.g. hypoactive sexual desire)
- Arousal (e.g. erectile dysfunction)
- Orgasm/ejaculation (e.g. premature ejaculation, retarded ejaculation or inability to ejaculate).
- Premature ejaculation occurs due to the rapid evolution of the two first stages of the sexual response cycle and is not necessarily related to strong sexual arousal or changes in erection.
- Premature Ejaculation seems to be a neurobiological problem that is related to low serotonin levels in those regions of the central nervous system that regulate ejaculation (brain and spinal cord).

**87. Which of the following is an absolute
CONTRAINDICATION to OCP use:**

a) Chronic renal disease

b) DVT

c) Diabetes mellitus

d) History of amenorrhea

Correct Answer - B

Ans. B. DVT

Contraindications to combined oral contraceptives

- They are generally accepted to be contraindicated in women with pre-existing cardiovascular disease, in women who have a familial tendency to form blood clots/ thrombosis (such as familial factor V Leiden), women with severe obesity and/or hypercholesterolemia (high cholesterol level), and in smokers over age 40.
- COCP are also contraindicated for women with liver tumors, hepatic adenoma or severe cirrhosis of the liver, and for those with known or suspected breast cancer.

88. Hormone replacement therapy is not

a) Urogenital atrophy

b) Vasomotor symptoms

c) Prevention of osteoporosis

d) Prevention of CAD

Correct Answer - D

Answer- D (Prevention CAD)

- Hormone replacement therapy increases the risk of MI (coronary artery disease). The increased risk is attributed to progestin component.
 - o HRT restore Ca^{++} balance, further bone loss is prevented and the excess fracture risk is nullified.
 - o There is a higher incidence of breast cancer.
 - o Risk for endometrial carcinoma is not increased as protective effect of progestin nullify the carcinogenic effect of estrogen.
 - o There is increased risk for gall stone and migraine.
 - o There is a small protective effective of HRT on colorectal cancer.
- Note :?
- o Usually in HRT combination of estrogen and progestin is given (combined HRT), except in hysterectomized women where estrogen alone is given.
 - o With estrogen alone there is increased risk of endometrial cancer and decrease risk of coronary artery disease (as estrogen increases HDL and decreases LDL and triglyceride level).
 - o So for HRT with estrogen alone the answer of this question will change. In that case it will be option 'a' i.e., increased risk of coronary artery disease.

89. A mother comes with history of antenatal fetal death due to neural tube defect in first child. What is the amount of folic acid you will prescribe during pre-conceptual counseling?

a) 4 micrograms/day

b) 40 micrograms/day

c) 400 micrograms/day

d) 4000 micrograms/day

Correct Answer - D

Ans: D. 4000 micrograms/day

(Ref Williams 24/e p1104; Nelson 20/e p2805, 20/e p2805, 19/e p2001)

- If a pregnancy is planned in high-risk women (previously affected child with neural tube defects), supplementation should be started with 4 mg (= 4000 microgram) of folic acid daily, beginning 1 month before the time of the planned conception.

Recommendations:

- By U.S. Public Health Service.
- Folic acid 0.4 mg daily - For all women of childbearing age & ones capable of becoming pregnant.
- Folic acid 4 mg (= 4000 microgram) daily - For planned pregnancy in high-risk women (previously affected child) - Beginning 1 month before time of planned conception.

Areas addressed by the preconception care :

- Nutritional conditions

- Vaccinepreventable diseases
- Genetic conditions
- Environmental health
- Infertility/ subfertility
- Female genital mutilation
- Too early, unwanted and rapid successive pregnancies
- Sexually transmitted infections
- Human immunodeficiency virus (HIV)
- Interpersonal violence
- Mental health
- Psychoactive substance use
- Tobacco use

90. A lady with abdominal mass was investigated. On surgery, she was found to have bilateral ovarian masses with smooth surface. On microscopy they revealed mucin-secreting cells with signet ring shapes. Most probable diagnosis is:

a) Krukenberg tumor

b) Dysgerminoma

c) Mucinous adenocarcinoma of the ovaries

d) Dermoid cyst

Correct Answer - A

Ans: A. Krukenberg tumor

(Ref Robbins 9/e p1034: 8/e p1050)

Krukenberg tumor:

- Classic metastatic gastrointestinal carcinoma involving ovaries.

Features:

- Characterized by bilateral metastases composed of mucin-producing, signet-ring cancer cells, most often of gastric origin.

91. A young lady with 6 weeks amenorrhea had nausea and vomiting with severe abdominal pain. Her BP was 100/80 mm Hg. Examination revealed a 5 x 5 cm adnexal mass. What is the plan of management?

a) Plan for immediate laparoscopic surgery

b) beta-hCG

c) Methotrexate

d) Give IV fluids, keep NPO and observe for 4-5 days

Correct Answer - A

Ans: A. Plan for immediate laparoscopic surgery

(Ref: Dutta 8/e. p215, 7/e p180-182; 24/e p3855)

- Here adnexal mass size is 5 x 5 cm - Hence expectant management cannot be done.
- Patient is hemodynamically stable - Hence laparoscopic surgery is management of choice.
- **Ectopic Pregnancy – Treatment:**
 - **Laparoscopy:**
 - Preferred surgical treatment for ectopic pregnancy, unless hemodynamically unstable.
 - **Salpingostomy:**
 - Procedure of choice hemodynamically stable patient.
 - Recommended surgical procedure for ampullary ectopic pregnancy.
 - Retains fertility.

- **Salpingotomy:** Not done nowadays
- **Segmental resection & anastomosis:** Done in isthmic pregnancy
- **Fimbrial expression:** Done in distal ampullary pregnancy.

92. According to the 2010 WHO criteria what are the characteristics of normal semen analysis?

a) Volume 2.0 mL, count 20 million, morphology 4% progressive motility 32%

b) Volume 1.5 mL, count 15 million, morphology 4% progressive motility 32%

c) Volume 2.0 mL, count 15 million, morphology 40% progressive motility 32%

d) Volume 1.5 mL. count 20 million, morphology 4% progressive motility 32%

Correct Answer - B

Ans: B. Volume 1.5 mL, count 15 million, morphology 4% progressive motility 32%

(Ref Dutta 6/e p222)

- According to 2010 WHO criteria:
- Characteristics of normal semen analysis:

Semen Characteristics	WHO 1999	WHO 2010
Volume (ml)	Greater or equal to 2 ml	Greater or equal to 1.5 ml
Sperm count	Greater or equal to 20 million/ml	Greater or equal to 15 million/ml
Total sperm count	Greater or equal to 40 million per ejaculate	Greater or equal to 39 million per ejaculate
Total motility	Greater or equal to 50%	Greater or equal to 40%
Progressive		

motility	Greater or equal to 25%	Greater or equal to 32%
Vitality	Greater or equal to 75%	Greater or equal to 58%
Morphology (Normal form)	14%	Greater or equal to 4%
Leukocyte count (10 ⁴ /m1)	<1	<1

93. Placenta grade 3, 35+3 weeks pregnancy, and absent end diastolic flow in Doppler; next management is:

a) Dexamethasone and terminate after 48 hours

b) Terminate after 37 weeks

c) Talk with pediatrician and termination

d) Monitor and do nothing

Correct Answer - A

Ans. a. Dexamethasone and terminate after 48 hours

- Antenatal Corticosteroid Therapy
- A single dose of corticosteroids is recommended for pregnant women with gestational age 23-34 weeks of gestation who are at risk of preterm delivery within 7 days.
- A complete course is
- Betamethasone two 1M 12 mg doses given 24 hours apart
- OR
- Dexamethasone four IM 6 mg doses given 12 hours apart.

94. Which of the following statements is not true about cervical cancer screening guidelines according to WHO?

a) Pap smear should be repeated yearly in women of reproductive age group

b) HPV test should be done five yearly in women between age of 30 to 49 years

c) Visual inspection with acetic acid is more reliable at older age as it becomes easier to identify the transformation zone with age

d) Pap smear can be repeated less frequently if it comes out negative for 3 consecutive years

Correct Answer - A

Ans: A. Pap smear should be repeated yearly in women of reproductive age group

(Ref Harrison 19/e p481, 18/e 1662)

WHO cervical cancer screening guidelines:

- Pap smear repeated 3 yrs once.

Tests for cervical cancer screening:

- 2 types – VIA & Pap smear.

VIA (Visual inspection with acetic acid):

- For women with visible transformation zone.
- Transformation zone - Most precancerous lesions occur.
- Preferred for younger than 50 females.
- Since menopause recedes transformation zone into endocervical canal & invisible

95. Placental enlargement is seen in which of the following infections except?

a) Toxoplasma

b) CMV

c) Parvovirus

d) Plasmodium

Correct Answer - D

Ans. D.Plasmodium

Maternal

- Maternal diabetes
- Rh incompatibility
- Anemia
- Chronic intrauterine infection: TORCH (Toxoplasmosis, rubella, CMV, herpes), syphilis, VZV, Parvovirus B-19.
- Alpha – thalassemia

Fetal

- High output heart failure
- Umbilical vein obstruction
- Hydrops fetalis (all causes)
- Sacrococcygeal teratoma
- Beckwith - Wiedemann syndrome
- Placental :Choriocarcinoma, Hemorrhage, hydatidiform mole
- Finnish type nephrotic syndrome

96. Carboprost, used for 2' trimester abortion, is analogue of ?

a) PGE2

b) PGF2a

c) PGI2

d) PGD2

Correct Answer - B

Ans. is 'b' i.e., PGF2a

Carboprost is a synthetic prostaglandin analogue of $\text{PGF}_{2\alpha}$ (specifically, it is 15-methyl- $\text{PGF}_{2\alpha}$) with oxytocic properties.

Carboprost induces contractions and can trigger abortion in early pregnancy. It also reduces postpartum bleeding.

97. At 28 weeks of pregnancy a G1Po woman urine dipstick test is showing mild glycosuria. Next line of management is ?

a) Nothing is require

b) Glucose challenge test

c) Glucose tolerance test

d) Start antidiabetic drug

Correct Answer - B

Ans. B i.e., Glucose challenge test

- Glucosuria in pregnancy (without elevation of serum glucose) → Occurs due to decrease in renal threshold of glucose.
- Gestational diabetes → Diabetes/glucose intolerance diagnosed (first recognized) in pregnancy, in otherwise normal women.
Type 1 /Type 2 diabetes in pregnancy → A known diabetic women becomes pregnant
- In the given question, the mother was normal before the pregnancy. It rules out diabetes mellitus type 1 or type 2.
- In the given situation, we must differentiate between normal glycosuria of pregnancy and gestational diabetes.
- This differentiation is done by glucose challenge test, i.e. screening test for gestational diabetes.
- In the given question, the mother was normal before the pregnancy. It rules out diabetes mellitus type 1 or type 2.
- In the given situation, we must differentiate between normal glycosuria of pregnancy and gestational diabetes.
- This differentiation is done by glucose challenge test, i.e. screening test for gestational diabetes.

98. Choriocarcinoma with lung metastasis is stage ?

a) 1

b) 3

c) 2

d) 4

Correct Answer - B

Ans. is 'b i.e., 3 Stage I

Disease confined to uterus

Stage IA: Disease confined to uterus with no risk factors

Stage IB: Disease confined to uterus with one risk factor

Stage IC: Disease confined to uterus with two risk factors

Stage II: Gestational trophoblastic tumor extending outside uterus but limited to genital structures(adnexa, vagina, and broad ligament)

Stage IIA: Gestational trophoblastic tumor extending outside uterus but limited to genital structures without risk factors

Stage IIB: Gestational trophoblastic tumor extending outside uterus but limited to genital structures with one risk factor

Stage IIC: Gestational trophoblastic tumor extending outside uterus but limited to genital structures with two risk factors

Stage III: Gestational trophoblastic disease extending to lungs with or without known genital tract involvement

Stage IV: Gestational trophoblastic tumor extending to lungs with or

IIIA	without genital:tract involvement and with no risk factors
Stage IIIA	Gestational trophoblastic tumor extending to lungs with or without genital tract involvement and with one risk factor
Stage IIIB	Gestational trophoblastic tumors extending to lungs with or without genital tract involvement and with two risk factors
Stage IIIC	
Stage IV:	All other metastatic sites (liver/brain)
Stage IVA:	All other metastatic sites without risk factors
Stage IVB:	All other metastatic sites with one risk factor
Stage IVC:	All other metastatic sites with two risk factors

99. Hemoconcentration is seen In?

a) Normal pregnancy

b) Preeclampsia

c) Ectopic pregnancy

d) All of the above

Correct Answer - B

Ans. is 'b' i.e., Preeclampsia

- Preeclampsia is a pregnancy specific syndrome of reduced organ perfusion secondary to vasospasm and endothelial activation characterized by BP 140/90 mm Hg after 20 weeks of gestation and proteinuria 300 mg per 24 h after 20th week in a previously normotensive and nonproteinuric patient.

100. Air in the urine bag after laparoscopic hysterectomy is due to:

a) Expected & a normal finding

b) Bowel perforation

c) Bladder injury

d) Blocked Foley catheter

Correct Answer - C

Ans. is 'c' i.e., Bladder injury

- When injured, the bladder is usually penetrated by, the Veress needle or trocar .
- Trocar injuries are typically to the bladder dome and have an entry and exit wound.
- The position of the bladder should be assessed on initial examination with the laparoscope. All secondary trocars should be placed under direct visualization.
- During the operation, the diagnosis of bladder injury is suggested by the presence of gas filling up the Foley bag or visibly bloody urine in the Foley bag.
- Other signs of injury are urinary/fluid drainage from a secondary trocar site incision, or fluid pooling in the abdomen/pelvis.
- If a bladder injury is suspected, the bladder should be filled with methylene blue-colored saline. The forcing out of fluid/dye indicates a bladder injury.

101. Incidence of choriocarcinoma is seen more after:

a) Ectopic pregnancy

b) Spontaneous abortion

c) Normal delivery

d) Cesarean section

Correct Answer - B

Ans. is 'b' i.e., Spontaneous abortion

Among all the cases of choriocarcinoma:

- 50% develop following a hydatidiform mole
- 25% develop following an abortion
- 20% develop following a full-term pregnancy and 5% develop following an ectopic pregnancy

102. The incision in which rectus abdominis muscle is cut transversely is :

a) Pfannenstiel

b) Maylard

c) Kerr

d) All of the above

Correct Answer - B

Ans. is 'b' i.e, Maylard

- Maylard Incision is a surgical incision in which a transverse cut is made on rectus abdominis muscle to allow wider access to the pelvic cavity. It is also called Mackenrodt incision.
- For gynaecological surgery, the skin incision is made 5-8 cm above the pubic symphysis.
- The rectus fascia and rectus muscles are transected. Care must be exercised at the lateral margin of the rectus muscle to ensure the integrity of the inferior epigastric artery and vein. The muscle is totally transected.

103. 22 years old female unable to conceive since 12 months, known case of pelvic inflammatory disease, normal menses, normal vaginal and cervical examination, next line investigation :

a) HSG

b) AMH

c) Hysteroscopy

d) CA 125

Correct Answer - A

Ans. is 'a' i.e., HSG

Pelvic Inflammatory Disease

- It is the infection and inflammation of the upper genital tracts, typically involving fallopian tubes, ovaries, and surrounding structures.
- It can cause tubal damage & can lead to infertility (tubal factor). Hence , in this patient, tubes need to evaluated.
- Hysterosalpingography (HSG) : cavity of the uterus and fallopian tube patency can be checked: As it does not require anesthesia, it is the first-line investigation for checking tubal patency.

104. Most common site of tubal rupture is seen in which tubal pregnancy ?

a) Interstitial

b) Ampulla

c) Isthmus

d) Infundibulum

Correct Answer - C

Ans. is 'c' i.e., Isthmus

- Isthmic and interstitial pregnancies have more chances of rupture while the ampullary pregnancies have more chances of tubal abortion.
- Out of the isthmic and interstitial ectopics, isthmic pregnancies have more chance of rupture as isthmic pregnancies are more common and wall of isthmic portion of the fallopian tube is narrow and less distensible and is easily eroded by chorionic villi.

105. In non pregnant uterus cervical incompetence is treated by ?

a) Counselling

b) Shirodkars cerclage suture

c) McDonalds cerclage suture

d) Abdominal cerclage

Correct Answer - A

Ans. is 'a' i.e., Counselling

Cervical incompetence treatment in INTERCONCEPTIONAL PERIOD (non pregnant uterus):

- To alleviate anxiety and to improve the psychology - couple should be counselled that even after three consecutive miscarriages, the chance of a successful pregnancy is high (70%). However, the success rate depends on the underlying etiology as well as the age of the woman.

106. Most common cause of hypothyroidism in pregnancy is ?

a) Nutritional

b) Irradiation

c) Anti thyroid drugs ie iatrogenic

d) Anti TPO antibody

Correct Answer - D

Ans. is 'd' i.e., Anti TPO antibody

Hypothyroidism in pregnancy

The clinical association of hypothyroidism in pregnancy may be due to :

- First time diagnosis in pregnancy
- Hypothyroid women who either discontinue thyroid therapy or who need larger doses in pregnancy
- Hyperthyroid women on excessive amounts of antithyroid drugs
- Women with lithium or amiodarone therapy
- Primary hypothyroidism met in pregnancy is mostly related to thyroid autoimmunity (Hashimoto thyroiditis).
- Serum thyroid peroxidase antibodies (TPO-Ab) or antimicrosomal antibodies are elevated in autoimmune thyroiditis.

107. Endometrial repair after menstrual bleeding is under the influence of which hormone ?

a) FSH

b) Progesterone

c) Estrogen

d) LH

Correct Answer - C

Ans. is 'c' i.e., Estrogen

- After menstruation there is proliferative phase, which is under the control of estrogen.
- Secretory phase is controlled by progesterone

108. Theca lutein are usually managed by -

a) USG guided therapeutic aspiration

b) Medical management with methotrexate

c) Laparoscopiccystectomy

d) Spontaneous regression - resolves after management of the underlying cause

Correct Answer - D

Ans is 'd' i.e., Spontaneous regression-resolves after management of the underlying cause

Theca Lutein Cysts

- These cysts can sometimes enlarge to several centimeters in diameter.
- They are usually bilateral and filled with straw-colored fluid.
- Theca lutein cysts are often found in association with hydatidiform moles, choriocarcinoma and gonadotropin (hCG) or clomiphene therapy.
- The cysts spontaneously regress after elimination of the mole, therapeutic curettage, treatment of choriocarcinoma or discontinuation of gonadotropin therapy.
- Functional cysts are distinguished from neoplastic cysts by the fact that they never grow more than 7 cm in size, are unilocular with clear fluid, and regress after some time.

109. Treatment of choice for placental site trophoblastic disease is -

a) Observation

b) Surgery

c) Chemotherapy

d) Radiotherapy

Correct Answer - B

Ans. is 'b' i.e., Surgery

Placental Site Trophoblastic Tumor

- Arises from the placental bed trophoblasts and invades the myometrium.
- Most of these tumors run a benign course, malignancy is rare.
- Tumor is resistant to chemotherapy.
- Hysterectomy is the recommended treatment.

110. Treatment for Gardnerella -

a) Metronidazole

b) Doxycycline

c) Azithromycin

d) Erythromycin

Correct Answer - A

Ans. is 'a' i.e., Metronidazole

Treatment for Bacterial vaginosis/ Gardnerella vaginosis is:

- Metronidazole 500 mg orally twice a day for 7 days
- Metronidazole gel, 0.75%, one full applicator (5g) intravaginally, once a day for 5 days.
- Clindamycin cream, 2%, one full applicator (5g) intravaginally at bedtime for 7 days.

111. Following are the characteristic features of an ideal IUCD candidate except?

a) Has borne at least two children

b) Has no history of pelvic disease

c) Has normal menstrual periods

d) Is willing to check the IUCD tail

Correct Answer - A

Ans. is 'a' i.e., Has borne atleast two children

The Planned Parenthood Federation of America has described an ideal IUCD candidate as a woman who:

- Has borne atleast one child
- Has no history of pelvic disease
- Has normal menstrual periods
- Is willing to check the IUCD tail
- Has access to follow up and treatment of potential problems
- Is in monogamous relationship.

112. Clinical findings suggestive of adequacy of pelvis for vaginal delivery are all except?

a) Diagonal conjugate > 11.5 cm

b) Interspinous diameter > 8 cm

c) Sacrosciatic notch 2.5 - 3 finger breadths

d) Bituberous diameter > 8 cm

Correct Answer - B

Ans. is 'b' i.e., Interspinous diameter > 8 cm

Clinical findings suggestive of adequacy of pelvis for vaginal delivery are:

Findings indicating adequate pelvis

Forepelvis (pelvic brim)	Round
Diagonal conjugate	11.5 cm
Symphysis	Average thickness, parallel to sacrum
Sacrum	Hollow, average inclination
Side walls	Straight
Ischial spines	Blunt
Interspinous diameter	10.0 cm
Sacrosciatic notch	2.5-3 finger - breaths
Bituberous diameter	4 knuckles (> 8.0 cm)
Coccyx	Mobile
Anteroposterior diameter of outlet	11.0 cm

113. In Medical termination of pregnancy, according to FDA, Misoprostol is given after how many hours of Mifepristone?

a) 24 hours

b) 48 hours

c) 72 hours

d) 96 hours

Correct Answer - B

Ans. is 'b' i.e., 48 hours

FDA approved protocol - (Original protocol)

- 600 mg of mifepristone (i.e., 3 tablets) given orally on day 1 followed 2 days (48 hours) later by oral misoprostol 400 µg (2 tablets) on day 3.
- The treatment should be started no more than 48 days from the start of the last menstrual period.

But according to the recent protocol

- 200 mg of mifepristone (it is as effective as 600 mg of mifepristone) is given orally on Day 1 followed 2 days (48 hours) later by vaginal misoprostol 800 µg.
- This regime provides highest efficacy within 63 days of amenorrhea.

114. Following are the complications of gonococcal cervicitis except?

a) Fitz hug Curtis syndrome

b) Salpingitis

c) Endometritis

d) Vaginitis

Correct Answer - D

Ans. is 'd' i.e., Vaginitis

Complications of cervicitis

- Infection of Bartholin's gland
- **Urethritis**
- Acute endometritis
- Acute salpingitis
- Pelvic peritonitis infertility
- Peri hepatitis
- Ectopic pregnancy

115. Following are the early causes of death in criminal abortion except?

a) Hemorrhage

b) Vagal inhibition

c) Fat embolism

d) Septicemia

Correct Answer - D

Ans. is 'd' i.e., Septicemia

Death in criminal abortion

Early Causes

Hemorrhage
shock
vagal inhibition
Fat embolism
Air embolism
Cervix and vagina
Perforation of uterus

Delayed causes

General peritonitis
Pelvic tetanus
Pyemia
Septicemia
Secondary
hemorrhage

Late causes

Hepatitis
Meningitis
Pneumonitis
Endocarditis
Pulmonary embolism
Systemic poisoning

116. Hemolytic disease of newborn is least common with which blood group female

-

a) A

b) B

c) O

d) AB

Correct Answer - C

Ans. is 'c' i.e., O

- ABO incompatibility has a protective effect to the development of Rh sensitization and thus the development of hemolytic disease of newborn

117. Best fertility result in?

a) Bicornuate

b) Unicornuate

c) Septate

d) Arcuate

Correct Answer - D

Ans. D. Arcuate

Delivery rate and uterine malformations

- The overall term delivery rate with uterine malformations is poorer and obstetrical complications are more common.
- Arcuate uterus has the best reproductive outcome with the live birth rates similar to normal uteri.

118. Placental abnormality related to PPH is?

a) Placenta accreta

b) Placenta percreta

c) Retained placental

d) All the above

Correct Answer - D

Ans. is 'd' i.e., All the above

- Placenta: morbidly adherent placenta (accrete, percreta), partially or completely separately separated placenta but with retained bits of placental tissue leads to PPH.

119. Following are the common histological types of Bartholin's gland carcinoma except?

a) Adenocarcinoma

b) Squamous cell carcinoma

c) Adenosquamous carcinoma

d) Transitional cell carcinoma

Correct Answer - D

Ans. is 'd' i.e., Transitional cell carcinoma

Histological type	% of total Bartholin's gland carcinomas
Adenocarcinoma	40
Squamous cell carcinoma	40
Adenocystic carcinoma	15
Adenosquamous carcinoma	5
Transitional cell carcinoma	rare
Small cell carcinoma	rare

120. Saline infusion sonography is also called?

a) Sonohysterography

b) Sonosalpingography

c) Hysterosalpingography

d) None of the above

Correct Answer - A

Ans. is 'a' i.e., Sonohysterography

Saline Infusion Sonography

- It is also called Sonohysterography.
- In this procedure sterile saline is instilled into the uterine cavity before ultrasound evaluation for more precise visualization of the endometrial structures.
- It is often used as second step in the evaluation of abnormal uterine bleeding.
- It is particularly useful when ultrasonography suggests a focal lesion, when endometrial biopsy is nondiagnostic, or when abnormal bleeding persists despite normal initial work up.

121. Following are the brachytherapy techniques for carcinoma cervix except-

a) Paris technique

b) New York technique

c) Manchester technique

d) Stockholm technique

Correct Answer - B

Ans. B. New York technique

- The Manchester system of cervical brachytherapy was one of the most commonly used methods of cervical brachytherapy, till the arrival of computer-based dosimetry.
- Before a look into the reason why this system was so popular we must look into the history of cervical brachytherapy and dosimetric systems as a whole
- In the Paris system of cervical brachytherapy, a single application of radium was specified. the system incorporated two cork colpostats in the form of a cylinder and an intrauterine tube.
- The Stockholm system of cervical brachytherapy was the predecessor of modern-day cervical brachytherapy dosimetric systems.
- In this system of fractionated course of radiotherapy was delivered and the total course of radiation therapy was delivered over a period of one month.
- Usually 2-3 applications were used, with each application lasting for a period of 20 to 30 hours.

122. First symptom invulval cancer is-

a) Pain

b) Pruritis

c) Ulcer

d) Blood discharge

Correct Answer - B

Ans. B.Pruritis

- Women with WN and yulvar cancer commonly present with pruritus and a visible lesion.
- However, pain, bleeding, and ulceration may also be initial complaints'

123. Diameter of graafian follicle at the time of ovulation is -

a) 10mm

b) 15mm

c) 20mm

d) 25mm

Correct Answer - C

Ans. C. 20mm

- Ovulation is a process by which a secondary oocyte is released from the ovary following rupture of a mature Graafian follicle and becomes available for conception.
- There is a pre - ovulatory enlargement in the Graafian follicle and it measures about 20 mm at the time of ovulation.

124. In dysmenorrhoea indomethacin works by –

a) Inhibiting prostaglandin synthetase

b) Suppressing ovulation

c) Reducing inflammation

d) Relaxing smooth muscle

Correct Answer - A

Ans.a Inhibiting prostaglandin synthetase

- Indomethacin is a NSAIDs. All NSAIDs act by inhibiting prostaglandin synthesis by inhibiting enzyme cyclooxygenase.

125. Intervillous space placenta contains howmuch blood -

a) 50 ml

b) 100 ml

c) 150 ml

d) 200 ml

Correct Answer - C

Ans. is 'c' i.e., 50 ml

Volume of blood in mature placenta	500 ml
Volume of blood in intervillous space	150 ml
Blood flow in intervillous space	500 - 600 ml/ min
Pressure in intervillous space	30-50mmHg
During uterine contraction	10-15mmHg
During uterine relaxation	
Pressure in the supplying uterine artery	70-80 mmHg
Pressure in the draining uterine artery	8 mmHg

126. Most common mass descending mass per vaginum

a) Labial cyst

b) Vaginal cyst

c) Myoma

d) Uterovaginal prolapse

Correct Answer - D

Ans. is 'd' i.e., Uterovaginal prolapse

- Mass descending per vaginum is a common gynaecological complaint and is most often due to uterovaginal prolapse.

127. Most common congenital heart disease during pregnancy -

a) ASD

b) VSD

c) TOF

d) AS

Correct Answer - A

ANS. A. ASD

- Atrial Septal Defect (ASD) ostium secundum type is the most common congenital heart disease encountered in pregnancy.

128. Cusco's speculum is –

- a) Double bladed posterior vaginal speculum
- b) Bivalve selfretaining vaginal speculum
- c) Double bladed selfretaining posterior vaginal speculum
- d) Bivalve double bladed vaginal speculum

Correct Answer - B

**Ans. is 'b' i.e., Bivalve self retaining vaginal speculum
Cusco's self-retaining bivalved speculum is a surgical instrument used for vaginal and cervical examination**

- It limits the visualization of the vaginal walls.
- It is used to visualize the cervix and the vaginal fornixes for the local cause of APH.
- It is also used for minor procedures like pap smear and IUCD insertion.
- It is also used to detect the leakage of liquor from the cervical os in case of suspected PROM.

129. Heterotopic pregnancy -

a) Incidence is 10%

b) Occurs following assisted reproductive techniques

c) Has two extrauterine gestational sacs

d) Has one gestational sac in fallopian tube and other intrauterine

Correct Answer - B

Ans. is 'b' i.e., Occurs following assisted reproductive techniques

- Heterotopic pregnancy
- It is the rare simultaneous existence of intrauterine and extrauterine gestational sacs.
- It is a rare complication of multiple pregnancy, but its incidence increases to 10% of the pregnancies following assisted reproductive techniques.

130. The classic triad of ruptured ectopic pregnancy includes all except

a) Fainting

b) Abdominal pain

c) History of amenorrhoea

d) Vaginal bleeding

Correct Answer - A

Ans. is'a.i.e., Fainting

The symptoms of patient with ruptured ectopic pregnancy are as follows:

- Classic triad of abdominal pain, history of amenorrhoea and vaginal bleeding.
- Abdominal pain is the most constant feature with acute agonizing colicky type of pain.
- Shoulder pain may be present due to diaphragmatic irritation from hemoperitoneum leading to referral shoulder pain.
- Vomiting and fainting attacks are observed in 10% of the patients due to reflex vasomotor disturbances following peritoneal irritation from hemoperitoneum.

131. Footling presentation with normal baby at 39 weeks of gestation, what is the best line of management?

a) Caesarean section

b) Vaginal delivery

c) External cephalic version

d) Expectant management

Correct Answer - A

Ans. is'a'i.e., Caesarean section

Elective caesarean section is preferred in woman with > 38 weeks of gestation with breech when:

- Estimated fetal weight is > 3.5 Kg
- Hyperextended head
- Footling presentation
- Pelvic inadequacy
- Associated complication (obstetric and/ or medical)
- Absence of expertise for delivery

132. Hidradenoma of vulva occurs arises from

a) Apocrine glands

b) Sebaceous glands

c) Subcutaneous tissue

d) Hair follicle

Correct Answer - A

Ans. is 'a' i.e., Apocrine glands

- Hidradenoma - arises from the apocrine glands of vulva.
- It rarely exceeds 1 cm size
- Histologically it shows cystic spaces enclosing a papillary adenomatous mass
- It may undergo malignant change and thus requires excision.