

INI CET Obstetrics and Gynaecology

Sample Paper – 1

Duration: 14 Minutes

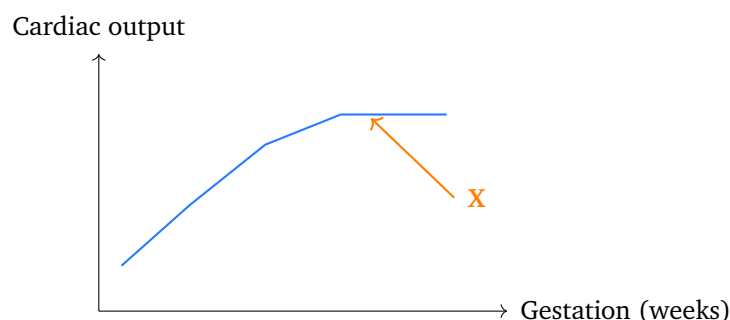
Maximum Marks: 15

Instructions

- This paper contains **15** Multiple Choice Questions (Single Best Response), modelled on the Obstetrics and Gynaecology content of **INI CET** (Institutes of National Importance Combined Entrance Test) conducted by AIIMS New Delhi.
- The **15-question** length matches the number of Obstetrics and Gynaecology items you actually meet in the real 200-question paper.
- Each correct answer carries **+1 mark**. There is **negative marking of one-third (0.33) mark** for every incorrect answer; unattempted questions carry no penalty.
- Every question has **exactly one best answer**. Choose the single most appropriate option.
- Attempt this practice paper in one timed sitting of about **14 minutes**, the pace the real computer-based test demands.

Obstetrics: Antenatal Care and Physiology

Q1. The graph shows the rise in maternal cardiac output across gestation (marked X). Compared with the non-pregnant state, by the end of pregnancy the cardiac output increases by approximately:



(A) No significant change



- (B) 10 to 15 percent
- (C) 20 to 25 percent
- (D) 40 to 50 percent

Q2. Which statement correctly describes the haematological change of normal pregnancy?

- (A) Red cell mass increases more than plasma volume
- (B) Both plasma volume and red cell mass fall together
- (C) Plasma volume increases more than red cell mass, producing haemodilution
- (D) Platelet count rises markedly above the non-pregnant range

Q3. The physiological (dilutional) anaemia of pregnancy occurs mainly because:

- (A) The red cell mass falls below the non-pregnant level
- (B) The plasma volume increases proportionately more than the red cell mass
- (C) Iron absorption from the gut decreases sharply in pregnancy
- (D) There is continuous occult blood loss throughout pregnancy

Obstetrics: Complications of Pregnancy

Q4. New-onset hypertension after 20 weeks of gestation establishes a diagnosis of pre-eclampsia when it is accompanied by:

- (A) Glycosuria
- (B) Dependent pedal oedema alone
- (C) Low-grade fever
- (D) Proteinuria or new-onset end-organ (renal, hepatic, neurological or haematological) dysfunction

Q5. The drug of choice for the prevention and control of eclamptic convulsions is:



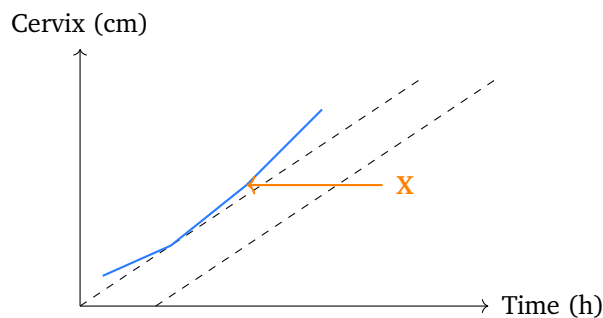
- (A) Phenytoin
- (B) Diazepam
- (C) Labetalol
- (D) Magnesium sulphate

Q6. During magnesium sulphate therapy for eclampsia, the earliest clinical sign of magnesium toxicity that must be monitored before each dose is:

- (A) Tachycardia
- (B) Loss of the deep tendon (patellar) reflexes
- (C) Rising blood pressure
- (D) Diarrhoea

Labour and Puerperium

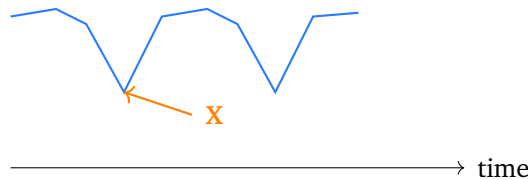
Q7. In the partogram shown, cervical dilatation is plotted against time with the alert and action lines. The labour curve crossing to the right of the alert line (marked X) signifies:



- (A) Normal, satisfactory progress of labour
- (B) A completed second stage of labour
- (C) Slow progress of labour crossing the alert line, warranting reassessment
- (D) The onset of the puerperium

Q8. In the cardiotocograph shown, the transient fall in fetal heart rate (marked X) that begins with a uterine contraction and mirrors it, returning to baseline as the contraction ends, is a:





- (A) Early deceleration due to fetal head compression
- (B) Late deceleration due to uteroplacental insufficiency
- (C) Variable deceleration due to umbilical cord compression
- (D) Sinusoidal pattern

Gynaecology: Benign and Endocrine

- Q9.** In the FIGO PALM-COEIN classification of abnormal uterine bleeding, the letter “P” of the structural group stands for:
- (A) Polyp
 - (B) Pregnancy
 - (C) Prolapse
 - (D) Pelvic inflammatory disease
- Q10.** In the PALM-COEIN classification, which of the following is a STRUC-TURAL (PALM) cause of abnormal uterine bleeding rather than a non-structural (COEIN) cause?
- (A) Coagulopathy
 - (B) Adenomyosis
 - (C) Ovulatory dysfunction
 - (D) Iatrogenic cause
- Q11.** The commonest structural cause of abnormal uterine bleeding, represented by the letter “L” in PALM-COEIN, is:
- (A) Leiomyoma (uterine fibroid)
 - (B) Endometrial polyp
 - (C) Adenomyosis



(D) Endometrial carcinoma

Gynaecological Oncology

Q12. The two human papillomavirus (HPV) genotypes responsible for roughly 70 percent of cervical carcinomas worldwide are:

- (A) HPV 6 and 11
- (B) HPV 16 and 18
- (C) HPV 31 and 33
- (D) HPV 42 and 44

Q13. According to current World Health Organization guidance, the preferred primary test for cervical cancer screening in the general population is:

- (A) Mammography
- (B) Serum CA-125 estimation
- (C) HPV DNA testing (with cytology as a triage or co-test)
- (D) Endometrial biopsy

Contraception, Infertility and Infections

Q14. The principal mechanism of action of the copper intrauterine contraceptive device (Cu-IUCD) is:

- (A) A copper-induced sterile inflammatory reaction that is spermicidal and impairs fertilisation
- (B) Suppression of ovulation through circulating oestrogen
- (C) Thickening of cervical mucus by a progestogen
- (D) Purely mechanical pressure that blocks implantation

Q15. The principal mechanism by which the combined oral contraceptive pill prevents pregnancy is:

- (A) Causing endometrial atrophy only



- (B) Acting as a physical barrier to sperm
- (C) Inhibition of ovulation by suppressing the mid-cycle luteinising hormone surge
- (D) A direct spermicidal action in the vagina



Detailed Solutions**Q1.****Solution**

Concept – cardiovascular changes in pregnancy: Pregnancy is a high-output state driven by increased demand of the uterus, placenta and fetus.

Step 1 – direction of change: Cardiac output begins to rise in the first trimester and continues into the late second trimester, where it plateaus.

Step 2 – magnitude: At its peak the cardiac output is about **40 to 50 percent** above the non-pregnant value, achieved by a rise in both stroke volume and heart rate.

Why the other options are wrong:

- A, no change: incorrect, output rises substantially.
- B and C, 10 to 25 percent: these understate the true increase.

Final Answer: 40 to 50 percent ⇒ **D**

Answer: (D) [Go Back to Q1](#)

Q2.**Solution**

Concept – haematology of pregnancy: Blood volume expands to meet the needs of the uteroplacental circulation.

Step 1 – the two compartments: Plasma volume increases by about 40 to 50 percent, whereas red cell mass rises by only about 20 to 30 percent.

Step 2 – the net effect: Because plasma expands more than red cell mass, the blood is diluted, lowering the measured haemoglobin and haematocrit. This is the physiological (dilutional) anaemia of pregnancy.

Why the other options are wrong:

- A, red cell mass more than plasma: the opposite of what happens.
- B, both fall: both actually rise.
- D, platelet rise: platelet count tends to fall slightly (gestational thrombocytopenia), not rise.

Final Answer: Plasma volume increases more than red cell mass ⇒ **C**

Answer: (C) [Go Back to Q2](#)



Q3.

Solution

Concept – physiological anaemia of pregnancy: Both the plasma volume and the red cell mass rise in pregnancy, but not to the same degree.

Step 1 – compare the two increases: The plasma volume rises by about 50 percent, whereas the red cell mass rises by only about 25 percent.

Step 2 – the result: Because the plasma expands more than the cells, the blood is diluted and the haemoglobin concentration falls, even though the total red cell mass has actually increased. This is the **dilutional (physiological) anaemia** of pregnancy.

Why the other options are wrong:

- A, the red cell mass rises in pregnancy, it does not fall below the non-pregnant level.
- C, iron absorption in fact increases in pregnancy to meet the extra demand.
- D, there is no normal occult blood loss during a healthy pregnancy.

Final Answer: Plasma volume rises more than red cell mass $\Rightarrow$ **B**

Answer: (B) [Go Back to Q3](#)

Q4.

Solution

Concept – diagnosis of pre-eclampsia: Pre-eclampsia is a multisystem disorder appearing after 20 weeks of gestation.

Step 1 – the hypertension criterion: Blood pressure of 140/90 mmHg or higher on two occasions after 20 weeks in a previously normotensive woman.

Step 2 – the second criterion: Together with hypertension there must be **proteinuria**, or, in its absence, new-onset end-organ dysfunction such as raised creatinine, deranged liver enzymes, thrombocytopenia, pulmonary oedema or neurological features.

Why the other options are wrong:

- A, glycosuria: points to diabetes, not pre-eclampsia.
- B, oedema alone: non-specific and no longer a diagnostic criterion.
- C, fever: not a feature of pre-eclampsia.

Final Answer: Proteinuria or end-organ dysfunction $\Rightarrow$ **D**



Answer: (D) [Go Back to Q4](#)

Q5.

Solution

Concept – seizure prophylaxis and control in eclampsia: One agent is superior for both preventing and treating eclamptic fits.

Step 1 – name the drug: Magnesium sulphate is the drug of choice; trial evidence shows it outperforms phenytoin and diazepam in preventing recurrent seizures.

Step 2 – how it is given: By a loading dose followed by a maintenance regimen (for example the Pritchard or Zuspan protocol), with monitoring of reflexes, respiration and urine output.

Why the other options are wrong:

- A, phenytoin: less effective and now second line.
- B, diazepam: sedates but is inferior for seizure prevention.
- C, labetalol: controls blood pressure but does not prevent convulsions.

Final Answer: Magnesium sulphate ⇒ **D**

Answer: (D) [Go Back to Q5](#)

Q6.

Solution

Concept – monitoring magnesium sulphate toxicity: Magnesium is excreted renally, so accumulation can cause dose-dependent toxicity.

Step 1 – the earliest sign: Loss of the deep tendon (patellar) reflexes is the first clinical warning of rising serum magnesium and must be checked before each maintenance dose.

Step 2 – the sequence and antidote: Deeper toxicity brings respiratory depression and finally cardiac arrest; the antidote is intravenous calcium gluconate.

Why the other options are wrong:

- A, tachycardia: not a marker of magnesium toxicity.
- C, rising blood pressure: magnesium tends to lower, not raise, blood pressure.
- D, diarrhoea: seen with oral magnesium, not with the intravenous therapeutic dose.



tic use here.

Final Answer: Loss of deep tendon reflexes $\Rightarrow$ **B**

Answer: (B) [Go Back to Q6](#)

Q7.

Solution

Concept – the partogram: The partogram plots cervical dilatation against time with an alert line and, to its right, an action line.

Step 1 – read the graph: When the plotted dilatation curve moves to the right of the alert line (point X), progress is slower than the expected 1 cm per hour of the active phase.

Step 2 – the response: This is a signal to reassess the woman for the cause of slow progress; if the curve then crosses the action line, active intervention is indicated.

Why the other options are wrong:

- A, normal progress: a normal curve stays to the left of the alert line.
- B, completed second stage: the partogram tracks the first stage dilatation, not delivery.
- D, puerperium: this follows delivery of the placenta, unrelated to the graph.

Final Answer: Slow progress crossing the alert line $\Rightarrow$ **C**

Answer: (C) [Go Back to Q7](#)

Q8.

Solution

Concept – decelerations on the cardiotocograph: The timing of a deceleration relative to the contraction reveals its cause.

Step 1 – read the tracing: The dip at X starts and ends with the contraction and mirrors its shape (a uniform, symmetrical fall). This is an **early deceleration**.

Step 2 – the mechanism: It is caused by fetal head compression during the contraction, which produces a vagal reflex slowing of the heart. It is benign and needs no intervention.

Why the other options are wrong:

- B, late deceleration: begins after the peak of the contraction and reflects



uteroplacental insufficiency (a concerning pattern).

- C, variable deceleration: abrupt and variable in timing and shape, from cord compression.
- D, sinusoidal pattern: a smooth undulating baseline linked to fetal anaemia, not a single dip.

Final Answer: Early deceleration from head compression $\Rightarrow$

Answer: (A) [Go Back to Q8](#)

Q9.

Solution

Concept – PALM-COEIN classification: FIGO groups the causes of abnormal uterine bleeding into structural (PALM) and non-structural (COEIN) categories.

Step 1 – expand PALM: P = **Polyp**, A = Adenomyosis, L = Leiomyoma, M = Malignancy and hyperplasia.

Step 2 – confirm P: The “P” therefore stands for endometrial or endocervical polyp.

Why the other options are wrong:

- B, pregnancy: an important cause of bleeding but not part of the PALM-COEIN letters.
- C, prolapse: unrelated to this classification.
- D, pelvic inflammatory disease: not a PALM-COEIN category.

Final Answer: Polyp $\Rightarrow$

Answer: (A) [Go Back to Q9](#)

Q10.

Solution

Concept – structural versus non-structural causes: PALM causes are structural and can be imaged or biopsied; COEIN causes are non-structural.

Step 1 – sort the options: Adenomyosis is the “A” of PALM, a structural cause.

Step 2 – confirm the rest: Coagulopathy (C), Ovulatory dysfunction (O) and Iatrogenic (I) all belong to the non-structural COEIN group.

Why the other options are wrong:



- A, coagulopathy: the “C” of COEIN, non-structural.
- C, ovulatory dysfunction: the “O” of COEIN, non-structural.
- D, iatrogenic: the “I” of COEIN, non-structural.

Final Answer: Adenomyosis ⇒

Answer: (B) [Go Back to Q10](#)

Q11.

Solution

Concept – the “L” of PALM-COEIN: One structural lesion is by far the most common cause of abnormal uterine bleeding.

Step 1 – name it: The “L” stands for **Leiomyoma**, the uterine fibroid, the commonest benign tumour of the uterus.

Step 2 – link to bleeding: Submucosal and intramural fibroids increase and distort the endometrial surface, causing heavy menstrual bleeding.

Why the other options are wrong:

- B, endometrial polyp: the “P”, less common than fibroids.
- C, adenomyosis: the “A”, a distinct structural cause.
- D, endometrial carcinoma: part of “M” (malignancy), far less common than fibroids.

Final Answer: Leiomyoma ⇒

Answer: (A) [Go Back to Q11](#)

Q12.

Solution

Concept – HPV and cervical cancer: Persistent infection with high-risk HPV drives almost all cervical carcinomas.

Step 1 – name the key types: HPV 16 and 18 together account for about 70 percent of cervical cancers worldwide.

Step 2 – mechanism: Their E6 and E7 oncoproteins inactivate p53 and Rb, driving malignant transformation; both are covered by current HPV vaccines.

Why the other options are wrong:

- A, HPV 6 and 11: low-risk types causing genital warts, not cancer.



- C, HPV 31 and 33: high-risk but responsible for a much smaller share.
- D, HPV 42 and 44: low-risk, non-oncogenic types.

Final Answer: HPV 16 and 18 ⇒

Answer: (B) [Go Back to Q12](#)

Q13.

Solution

Concept – cervical cancer screening: Screening aims to detect pre-invasive disease before it becomes cancer.

Step 1 – current preferred test: The World Health Organization now recommends **HPV DNA testing** as the primary screening method, with cytology used for triage or as a co-test.

Step 2 – rationale: HPV testing is more sensitive than cytology alone, allowing longer screening intervals and detecting women at risk earlier.

Why the other options are wrong:

- A, mammography: screens for breast, not cervical, cancer.
- B, CA-125: a tumour marker used mainly for ovarian cancer.
- D, endometrial biopsy: assesses the endometrium, not the cervix.

Final Answer: HPV DNA testing ⇒

Answer: (C) [Go Back to Q13](#)

Q14.

Solution

Concept – how the Cu-IUCD works: The copper device is a highly effective non-hormonal contraceptive.

Step 1 – name the main mechanism: Copper ions provoke a **sterile inflammatory reaction** in the endometrium and are directly toxic to sperm, impairing sperm motility and fertilisation.

Step 2 – the net effect: The result is that few sperm reach and fertilise the ovum; any secondary effect on implantation is minor compared with its pre-fertilisation action.

Why the other options are wrong:



- B, ovulation suppression: this is how combined hormonal methods work, not the copper device.
- C, cervical mucus thickening: the action of progestogen-based methods.
- D, purely mechanical: the copper is chemically active, not merely a physical block.

Final Answer: Sterile spermicidal inflammatory reaction $\Rightarrow$ A

Answer: (A) [Go Back to Q14](#)

Q15.

Solution

Concept – how the combined oral pill works: The combined pill contains an oestrogen and a progestogen and acts mainly on the hypothalamic-pituitary axis.

Step 1 – the primary action: It **inhibits ovulation** by suppressing the secretion of gonadotrophins and abolishing the mid-cycle luteinising hormone surge.

Step 2 – supporting actions: Thickened cervical mucus and a thinned endometrium add further contraceptive effect, but preventing ovulation is the principal mechanism.

Why the other options are wrong:

- A, endometrial atrophy only: a supporting, not the principal, effect.
- B, physical barrier: describes condoms or diaphragms, not the pill.
- D, spermicidal action: not how the combined pill works.

Final Answer: Inhibition of ovulation $\Rightarrow$ C

Answer: (C) [Go Back to Q15](#)



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	D	2	C	3	B	4	D	5	D
6	B	7	C	8	A	9	A	10	B
11	A	12	B	13	C	14	A	15	C

