

**KENDRIYA VIDYALAYA SANGATHAN, NEW DELHI**  
**ZONAL INSTITUTE OF EDUCATION AND TRAINING, CHANDIGARH**  
**PRACTICE SET FOR PERIODIC TEST**

**SET- I**  
**SESSION: 2023-24**

**CLASS: XII**

**SUBJECT: BIOLOGY**

**MAXIMUM MARKS: 40**

**TIME: 1:30 HR**

Q.No	Questions	Marks
<b>SECTION A</b>		
1	In which method the sperm is artificially injected into the ovum by a fine micro syringe- a- ICSI                                      b- IVF                                      c- IUT                                      d- None of these	1
2	The scrotum helps in the spermatogenesis by- a- Increasing the temperature b- Lowering the temperature c- Regulating the LH and FSH d- Regulating the Testosterone	1
3	Contraceptive "Saheli" is developed by- a- NBRI                                      b- CDRI                                      c- IVRI                                      d- CIMAP	1
4	Assertion: Gynoecium consists of the pistil. Reason: It represents the male reproductive part in flowering plants. a- If both Assertion and Reason are true and Reason is the correct explanation of Assertion. b- If both Assertion and Reason are true but Reason is not the correct explanation of Assertion. c- If Assertion is true but Reason is false. d- If both Assertion and Reason are false.	1
5	Assertion- the zygote develops into a new individual in sexual reproduction or in animals. Reason- the zygote is not capable to develop new individuals in asexual animals. a- If both Assertion and Reason are true and Reason is the correct explanation of Assertion. b- If both Assertion and Reason are true but Reason is not the correct explanation of Assertion. c- If Assertion is true but Reason is false. d- If both Assertion and Reason are false.	1
<b>SECTION B</b>		
6	A bilobed ditheous anther has 50 MMC (microspore mother cell) per microsporangium how many male gametophytes this anther can produce? OR What is exine? Write its importance in pollen survival.	2
7	Draw a vertical section of a Maize grain and label it – (i) pericarp (ii) scutellum (iii) coleoptile (iv) radicle	2
8	Which of the following seeds are Ex albuminous/ albuminous and why? Groundnut seeds and Caster seeds	2
9	a. Where is acrosome present in humans? Write its functions. b. What is monospermy? How is polyspermy prevented in humans	2
10	Compare the role of the pituitary hormones during the menstrual cycle.	2

**SECTION C**

11	Give reasons- a. Most zygotes in angiosperms divide only after a certain amount of endosperm is formed. b. Micropyle remains as a small pore in the seed coat of a seed. c. (iv) Integuments of an ovule harden and the water content is highly reduced as the seed matures.	3
12	Answer the following questions- a. List two reasons that make copper-related contraceptives effective. b. What is periodic abstinence? c. Which method of contraception is best in your view? Write any two reasons to support the answer. OR Draw the various stages of zygote development and label each part.	3

**SECTION E (CASE STUDY-BASED QUESTION)**

13	<p>A couple got married 7 years ago but they still do not have any children. They had never used any contraceptive methods. The doctor told them about other methods of pregnancy and after the treatment, a girl child was born to them this year and both the couple are very happy.</p> <p>i- Such methods are collectively called as- a- PRT                      b- CRT                      c- ART                      d- AVRT</p> <p>ii- The AI method is generally used when- a- Sperm count is more than the average number b- Sperm count is less than the average number c- Both are correct d- Both are incorrect</p> <p>iii- Which program is involved in collecting eggs from females and sperm from males to induce fertilization in a test tube? a- Test tube baby programme b- Lactational amenorrhea c- Coitus interrupts d- fertility programme</p> <p>iv- Assertion: GIFT is an IVF technique for such couples. Reason: IN GIFT gamete is transferred to the endometrium of female a- If both Assertion and Reason are true and Reason is the correct explanation of Assertion. b- If both Assertion and Reason are true but Reason is not the correct explanation of Assertion. c- If Assertion is true but Reason is false. d- If both Assertion and Reason are false.</p>	4
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**SECTION D**

14	Explain the neuroendocrine method of the fetal ejection reflex. OR What do you mean by ART? Explain any 4 ARTs and explain their significance.	5
15	Explain the events that take place during oogenesis in the human female. OR Describe the hormonal control of spermatogenesis.	5
16	Give a detailed account of the adaptative changes in the followings- a- Hydrophily b- Entomophily OR The plants have ability to avoid inbreeding depression. Explain.	5



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- Chapter Biomolecules
- Chapter Chemical Kinetics
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- Chapter Electrochemistry I
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- Chapter Processes of isolation of elements (Deleted 2023-24)
- Chapter Solid State II (Deleted 2023-24)
- Chapter Solid State III (Deleted 2023-24)
- Chapter Solutions I
- Chapter Solutions II
- Chapter Surface Chemistry (Deleted 2023-24)
- Chapter The d and f block elements
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- Chapter Issue and Redemption of Debentures
- Chapter Financial Statements of a Company
- Chapter Dissolution of Partnership Firm
- Chapter Cash Flow Statements
- Chapter Analysis of Financial Statements
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- ❓ Chapter Planning
- ❓ Chapter Organising
- ❓ Chapter Nature And Significance Of Management
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- ❓ Chapter Business Environment

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- Chapter National Income Accounting
- Chapter Money and Banking
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- Chapter Income Determination

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- Chapter : Market Equilibrium
- Chapter : Introduction To Microeconomics

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- ? Chapter Algebra of Matrices II
- ? Chapter Algebra of Matrices III
- ? Chapter Application of Derivatives
- ? Chapter Application of Integrals
- ? Chapter Continuity and Differentiability
- ? Chapter Determinants
- ? Chapter Differential Equations
- ? Chapter Integrals
- ? Chapter Inverse Trigonometric functions
- ? Chapter Linear Programming
- ? Chapter Probability
- ? Chapter Relations and Functions
- ? **Chapter Tangent and Normal** (Deleted 2023-24)
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- ? Chapter Vector Algebra
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- Chapter Moving charges and magnetism I
- Chapter Magnetism and Matter
- Chapter Ray Optics and Optical Instruments II
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- Chapter Electrostatic potential and capacitance II
- Chapter Electrostatic potential and capacitance I
- Chapter Electromagnetic Waves
- Chapter Electromagnetic Induction
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- Chapter Atoms
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**ZONAL INSTITUTE OF EDUCATION AND TRAINING, CHANDIGARH**  
**PRACTICE SET FOR PERIODIC TEST**  
**SET- II**  
**SESSION: 2023-24**

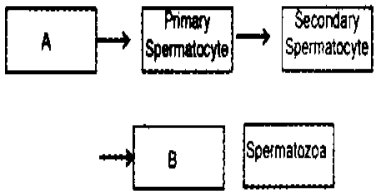
**CLASS: XII**

**SUBJECT: BIOLOGY**

**MAXIMUM MARKS: 40**

**TIME: 1:30 HR**

Q.No	Questions	Marks
SECTION A		
1	The egg apparatus is composed of one egg cell and a- One synergid b- Two polar nuclei c- Two synergid d- One polar nuclei	1
2	The developing pollen grain derives its nutrition by- a- Tapetum b- Endothecium c- Pollen mother cell d- Pollen tetrad	1
3	The seminiferous tubule inside the testes is lined by- a- Sertoli cell b- Spermatogonia c- Primary spermatocyte d- Both b and c	1
4	Assertion: Amniocentesis is the process by which amniotic fluid is studied. Reason: It is meant for determining the genetic disorders in the fetus. a- If both Assertion and Reason are true and Reason is the correct explanation of Assertion. b- If both Assertion and Reason are true but Reason is not the correct explanation of Assertion. c- If Assertion is true but Reason is false. d- If both Assertion and Reason are false.	1
5	Assertion: Periodic abstinence is a natural method of contraception. Reason: It is a very effective method and 100% sure of birth control. a- If both Assertion and Reason are true and Reason is the correct explanation of Assertion. b- If both Assertion and Reason are true but Reason is not the correct explanation of Assertion. c- If Assertion is true but Reason is false. d- If both Assertion and Reason are false.	1
SECTION B		
6	In flowering plants mostly, one male gamete fuses to form a zygote through the process of syngamy while the other male gamete fuses with polar nuclei to form a nutritive tissue. This process is known as double fertilization. List any two advantages of such reproduction.	2
7	The outer layer of the pollen grain is exine. The exine is made up of sporopollenin, one of the most resistant organic substances. It helps the pollen grains resist high temperatures, strong acids, and alkalis and also protects them from enzyme degradation. In spite of exine, we can see pollen tubes emerging from the outer layer of the pollen grain. Does it happen?	2
8	The menstrual cycle is a cyclic process in human females. In which condition it remains suspended and why?  OR The rupture of graffian follicles is associated with two key events. Mention these events.	2
9	Differentiate between- a- Spermiogenesis and Spermiation	2

	b- Blastocyst and morula	
10	A leaf cell of a diploid plant contains 12 chromosomes. Calculate the number of chromosomes in the endosperm of that plant.	2
SECTION C		
11	<p>Complete the flow chart and answer the questions:</p> <ol style="list-style-type: none"> <li>Label A and B</li> <li>Write the chromosome number of products formed from A</li> <li>By which process B develops into spermatozoa?</li> </ol> 	3
12	<p>Explain the events that cause the change in the chromosome number of oogonia from <math>2n</math> to <math>n</math>.</p> <p>OR</p> <p>Describe oogenesis only by giving flow chart.</p>	3
SECTION D (Case Study)		
13	<p>A class XII student of biology was surprised to know that fruits may be classified into true and false fruit. He argued with his friend about the concept. His biology teacher explained the concept of true and false fruit.</p> <ol style="list-style-type: none"> <li>True fruit is developed from- <ol style="list-style-type: none"> <li>Ovary</li> <li>Thalamus</li> <li>Petals and sepals</li> <li>Endosperms</li> </ol> </li> <li>Apple is a false fruit as it develops from – <ol style="list-style-type: none"> <li>Ovary</li> <li>Thalamus</li> <li>Petals and sepals</li> <li>Endosperms</li> </ol> </li> <li>Any fruit is a product of <ol style="list-style-type: none"> <li>Pre-fertilization event</li> <li>Post-fertilization even</li> <li>Parthenocarpy</li> <li>None of these</li> </ol> </li> <li>The false fruit may develop from- <ol style="list-style-type: none"> <li>Perianth</li> <li>Peduncle</li> <li>Thalamus</li> <li>All of these</li> </ol> </li> </ol>	4
SECTION D		
14	<ol style="list-style-type: none"> <li>Draw a labeled diagrammatic view of the human male reproductive system,</li> <li>Differentiate between vas deferens and vasa efferentia</li> </ol> <p>OR</p> <ol style="list-style-type: none"> <li>Mention the fate of the corpus luteum and its effect on the uterus in the absence of fertilization of the ovum in human females.</li> <li>Write the effect of high concentrations of LH on a mature Graafian follicle.</li> </ol>	5
15	<p>Draw the graphical representation of the menstrual cycle in a human female and answer the following questions-</p> <ol style="list-style-type: none"> <li>How the release of progesterone and LH is associated?</li> <li>Mention the condition when menses starts and stops in puberty age.</li> </ol> <p>OR</p> <p>Explain the formation of the placenta and umbilical cord during pregnancy.</p>	5
16	<p>Explain the following processes-</p> <ol style="list-style-type: none"> <li>Formation of zygote and role of egg apparatus in the flowering plant</li> <li>Development of endosperm in endospermic plant</li> </ol> <p>OR</p> <ol style="list-style-type: none"> <li>Illustrate the development of embryo in flowering plant only with the help of labelled diagram.</li> <li>Compare anatomy of monocotyledons and dicotyledons seeds .</li> </ol>	5

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- Chapter Continuity and Differentiability
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- Chapter Differential Equations
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- Chapter Relations and Functions
- Chapter Tangent and Normal (Deleted 2023-24)
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- Chapter Wave Optics I
- Chapter Semiconductor Electronics II
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- Chapter Nuclei
- Chapter Moving charges and magnetism II
- Chapter Moving charges and magnetism I
- Chapter Magnetism and Matter
- Chapter Ray Optics and Optical Instruments II
- Chapter Ray Optics and Optical Instruments I
- Chapter Electrostatic potential and capacitance II
- Chapter Electrostatic potential and capacitance I
- Chapter Electromagnetic Waves
- Chapter Electromagnetic Induction
- Chapter Electric Charges and Fields
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- Chapter Chemistry in everyday life(Deleted 2023-24)
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- Chapter Polymers (Deleted 2023-24)
- Chapter Processes of isolation of elements (Deleted 2023-24)
- Chapter Solid State II (Deleted 2023-24)
- Chapter Solid State III (Deleted 2023-24)
- Chapter Solutions I
- Chapter Solutions II
- Chapter Surface Chemistry (Deleted 2023-24)
- Chapter The d and f block elements
- Chapter The d and f block elements II
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- Chapter Biotechnology and its Applications
- Chapter Ecosystem
- **Chapter Strategies for Enhancement in Food Production**(Deleted 2023-24)
- Chapter Sexual Reproduction in flowering plants
- **Chapter Reproduction in Organisms**(Deleted 2023-24)
- Chapter Principles of Inheritance and variation III
- Chapter Principles of Inheritance and variation I
- Chapter Principles of Inheritance and variation II
- Chapter Organisms and Population
- Chapter Molecular Basis of Inheritance III
- Chapter Molecular Basis of Inheritance II
- Chapter Molecular Basis of Inheritance I
- Chapter Microbes in Human Welfare
- Chapter Human Reproduction II
- Chapter Human Reproduction I
- Chapter Human Health and Disease II
- Chapter Human Health and Disease I
- Chapter Evolution II
- Chapter Evolution I
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Retirement, Death of a Partner
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Admission of a Partner
- Chapter Issue and Redemption of Debentures
- Chapter Financial Statements of a Company
- Chapter Dissolution of Partnership Firm
- Chapter Cash Flow Statements
- Chapter Analysis of Financial Statements
- Chapter Accounting Ratios
- Chapter Accounting for Share Capital

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- ❓ **Chapter Financial Market** (Deleted 2023-24)
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- ❓ Chapter Staffing
- ❓ Chapter Principles Of Management
- ❓ Chapter Planning
- ❓ Chapter Organising
- ❓ Chapter Nature And Significance Of Management
- ❓ **Chapter Financial Management** (Deleted 2023-24)
- ❓ **Chapter Entrepreneurship Development** (Deleted 2023-24)
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- ❓ Chapter Controlling
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- ❓ Chapter Business Environment

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- Chapter : Theory Of Consumer Behavior
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- Chapter : Production And Costs

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- Chapter : Market Equilibrium
- Chapter : Introduction To Microeconomics

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- ❓ Chapter Algebra of Matrices I
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- ❓ Chapter Application of Integrals
- ❓ Chapter Continuity and Differentiability
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<b>Hindi</b>  Click to Join		<b>Information Technology (402)</b>  Click to Join	

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- 3.No personal Chats & Messages
4. No Spam
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Both teachers and students can also benefit from Artham educational resources which are free and openly licensed educational materials that can be used and shared for teaching and learning. Artham resource material include textbooks, courses, lesson plans, and multimedia resources that are available online.

In summary, resource materials are critical components of effective teaching and learning. They provide a wealth of information and support that can enhance the quality of education and help students achieve academic success.

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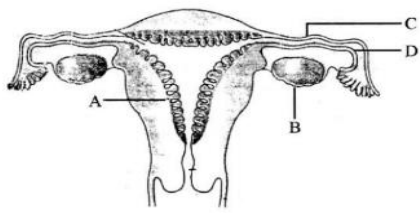
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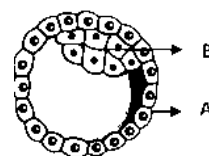
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**SUBJECT: BIOLOGY**

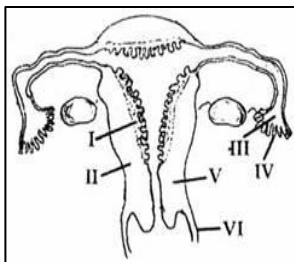
**TIME: 1:30 HR**

Q.No	Questions	Marks
<b>SECTION A</b>		
1	Amniocentesis is based on a- Amino acid detection      c- Amniotic fluid study b- Amnion layer study      d- All of these are correct	1
2	Which of the following cells secrete enzymes to dissolve the nucellus and create an entry for the male germ cells? a- Synergids      b- Egg cell      c- Both a and b      d- None of these	1
3	A procedure that finds use in testing for genetic disorders, but is also misused for female foeticide is: a- Lactational amenorrhea      b- AI      c- ICSI      d- Amniocentesis	1
4	Assertion: The trophoblast helps in the formation of the placenta. Reason: It is formed when the zygote is 4 celled stage. a- If both Assertion and Reason are true and Reason is the correct explanation of Assertion. b- If both Assertion and Reason are true but Reason is not the correct explanation of Assertion. c- If Assertion is true but Reason is false. d- If both Assertion and Reason are false.	1
5	Assertion: Coitus interruptus is a traditional family planning method Reason: In this male removes his penis from the vagina before ejaculation. a- If both Assertion and Reason are true and Reason is the correct explanation of Assertion. b- If both Assertion and Reason are true but Reason is not the correct explanation of Assertion. c- If Assertion is true but Reason is false. d- If both Assertion and Reason are false.	1
<b>SECTION B</b>		
6	Rearrange the following human reproductive events in the correct order of their occurrence: Formation of Zygote → Implantation → Gametogenesis → Gestation → Parturition	2
7	Observe the diagram given below showing the sectional view of the female reproductive system and name the parts labeled 'A', 'B', 'C' & 'D'. 	2
8	(a) Expand ART. (b) Suggest the ART which may be successful in the following condition: i) Inability of the male partner to inseminate the female. ii) Females cannot produce ovum but can provide a suitable environment for fertilization and further development.	2

9	<p>i- In which part of the human reproductive system the following events occur?</p> <p>a- Fertilization</p> <p>b- Implantation</p> <p>ii- A diagram of a human blastocyst is given below. Identify A &amp; B. Also write the significance of 'B'.</p>	2
10	<p>The contraceptive pill prevents ovulation. It also makes changes in the uterus which prevent sperm to fuse with the egg. It lessens the chance of zygote formation. Few women are not aware of the proper utilization of such pills. Answer the given questions</p> <p>(i) Give two examples of such pills?</p> <p>(ii) What schedule should be followed for taking these pills?</p>	2



### SECTION C

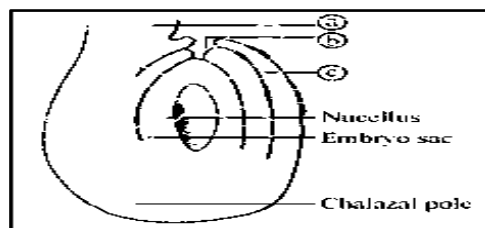
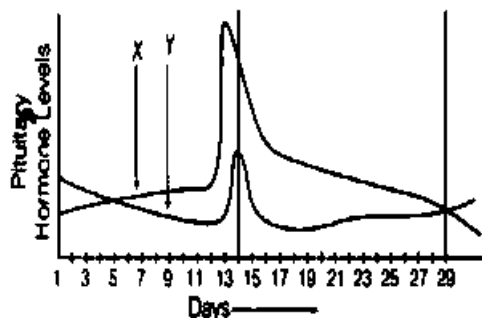
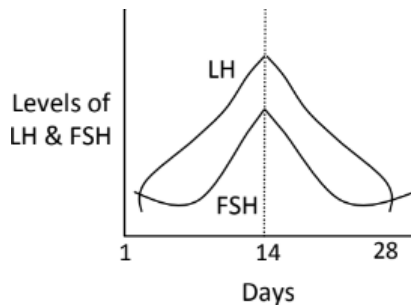
11	<p>Female uterus has glandular as well as muscular layers. Name these layers. Which layer is principally involved in the menstrual cycle? Also, mention the name of the hormone that causes the rupture of the uterine layer during the menstrual cycle.</p>	3
12	<p>Label the parts (I-VI) in the given diagram-</p> 	3

### SECTION D (Case Study)

13	<p>The flowering plant has male reproductive and female reproductive parts. The Stamens are the male reproductive part and the pistil is the female reproductive part. Flowers that contain either only pistils or only stamens are called unisexual flowers. Flowers that contain both stamens and pistils are called bisexual flowers.</p> <p>i- Which one is a unisexual flower-</p> <p>a- Papaya                      b- Mustard                      c- Rose                      d- All of these</p> <p>ii- Identify the bisexual flower –</p> <p>a- Mustard</p> <p>b- Corn</p> <p>c- Papaya</p> <p>d- All of these</p> <p>iii- Papaya produces which type of flowers?</p> <p>a- Hermaphrodite</p> <p>b- Unisexual</p> <p>c- Bisexual</p> <p>d- No flower</p> <p>iv- Assertion: Anther contains Pollen mother cell. Reason: Pollen tetrad is produced by the equational division of PMC.</p> <p>a. If both Assertion and Reason are true and Reason is the correct explanation of Assertion.</p> <p>b. If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.</p> <p>c. If Assertion is true but Reason is false.</p> <p>d. If both Assertion and Reason are false.</p>	4
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## SECTION E

14	<p>The graph below shows the levels of LH and FSH at various stages of menstrual cycle-</p> <p>i- Name the gland which secretes LH and FSH</p> <p>ii- b. What does happen when LH secretion is very low?</p> <p>iii- c. How does LH affect the male?</p> <p>iv- What is the role of FSH in females</p> <p style="text-align: center;"><b>OR</b></p> <p>Study the graph carefully and write the answers of the given questions-</p> <p>i- Name the hormones 'X' and 'Y'.</p> <p>ii- What does the maximum peak depict?</p> <p>iii- Which event takes place after 28 days?</p> <p>iv- Name two ovarian hormone that helps in the process.</p>	5
15	<p>i- Describe the structure of a mature microsporangium of an angiosperm.</p> <p>ii- Explain the process of microsporogenesis in angiosperms by giving a flow chart.</p> <p style="text-align: center;"><b>OR</b></p> <p>i- How does self-incompatibility restrict autogamy?</p> <p>ii- List ay two processes by which apomixis seeds are developed.</p> <p>iii- Draw L.S. of maize embryo.</p>	5
16	<p>A typical angiosperm embryo sac is 8 nucleate and 7-celled.</p> <p>ii Write the compositions of 7 cells</p> <p>iii Name the cells that constitute the egg apparatus.</p> <p>iiii Explain the monosporic type of embryo sac development.</p> <p style="text-align: center;"><b>OR</b></p> <p>Observe the figure of the angiosperm ovule given below:</p> <p>ii Identify the parts a, b, and c.</p> <p>iii Write the functions of c and b</p> <p>iiii Which part develops into seed</p>	5



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## ANIMATED VIDEOS CLASS- 12

### (SUBJECT: BIOLOGY IN HINDI)

- Chapter Biodiversity and Conservation
- Chapter Biology in Human Welfare (Deleted 2023-24)
- Chapter Biotechnology Principles and Processes
- Chapter Biotechnology and its Applications

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- Chapter Ecosystem
- **Chapter Strategies for Enhancement in Food Production**(Deleted 2023-24)
- Chapter Sexual Reproduction in flowering plants
- **Chapter Reproduction in Organisms**(Deleted 2023-24)
- Chapter Principles of Inheritance and variation III
- Chapter Principles of Inheritance and variation I
- Chapter Principles of Inheritance and variation II
- Chapter Organisms and Population
- Chapter Molecular Basis of Inheritance III
- Chapter Molecular Basis of Inheritance II
- Chapter Molecular Basis of Inheritance I
- Chapter Microbes in Human Welfare
- Chapter Human Reproduction II
- Chapter Human Reproduction I
- Chapter Human Health and Disease II
- Chapter Human Health and Disease I
- Chapter Evolution II
- Chapter Evolution I
- **Chapter Environmental Issues II** (Deleted 2023-24)
- **Chapter Environmental Issues I** (Deleted 2023-24)

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1. No introduction
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