BYJU'S Part Test for Board Term I
(CBSE Grade 12)

Date: 18/11/2021
Subject: Biology **Class:** Standard XII

Time:90minutes **Maximum Marks: 35**

General Instructions:

1. The Question Paper contains three sections.
2. Section A has 24 questions. Attempt any 20 questions.
3. Section B has 24 questions. Attempt any 20 questions.
4. Section C has 12 questions. Attempt any 10 questions.
5. All questions carry equal marks.
6. There is no negative marking.

BYJU'S Part Test for Board Term I (CBSE Grade 12)

Date: 18/11/2021

Subject: Biology

Topic : Section A

Class: Standard XII

---

1. A typical angiosperm anther has how many lobes?

   A. 1

   B. 2

   C. 3

   D. 4

2. Emasculation is not required when flowers are

   A. bisexual

   B. intersexual

   C. unisexual

   D. hermaphroditic

3. Wind pollination is common in which of the following plants?

   A. *Oxalis*

   B. Corn

   C. *Viola*

   D. *Zostera*

BYJU'S Part Test for Board Term I (CBSE Grade 12)

4. Which substance constitutes the outer hard layer of pollen grain?

   A. Exine

   B. Intine

   C. Sporopollenin

   D. Cellulose

5. How many meiotic divisions are required for formation of 100 functional megaspores?

   A. 100

   B. 50

   C. 25

   D. 75

6. In a hypothetical crossing, an angiospermic male plant has 2x chromosomes and the female plant has 4x chromosomes. Its endosperm will have _____ chromosomes.

   A. 4x

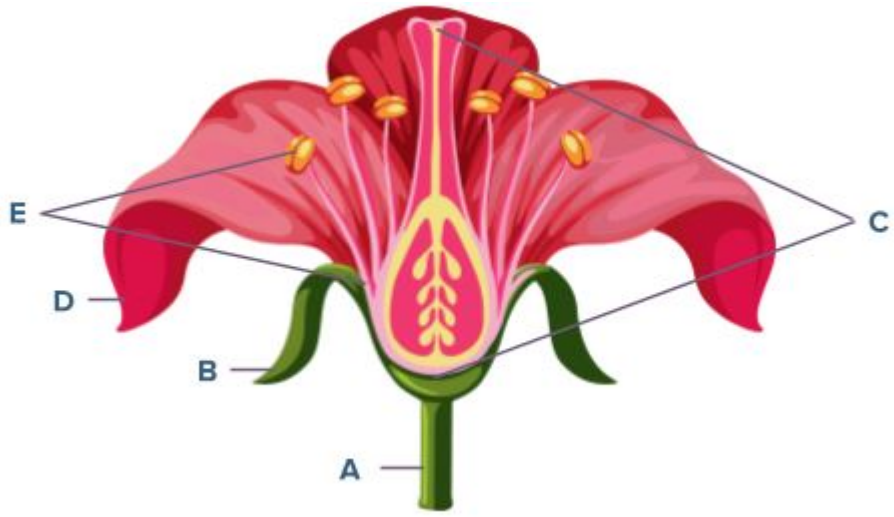
   B. 5x

   C. x

   D. 3x

BYJU'S Part Test for Board Term I (CBSE Grade 12)

7. Which of the following parts of the flower are regarded as sterile and fertile?



A.

Label	Sterile	Fertile
A	Thalamus	–
B	–	Corolla
C	–	Carpel
D	Calyx	–

B.

Label	Sterile	Fertile
A	Receptacle	–
B	–	Corolla
D	Calyx	–
E	–	Stamen

C.

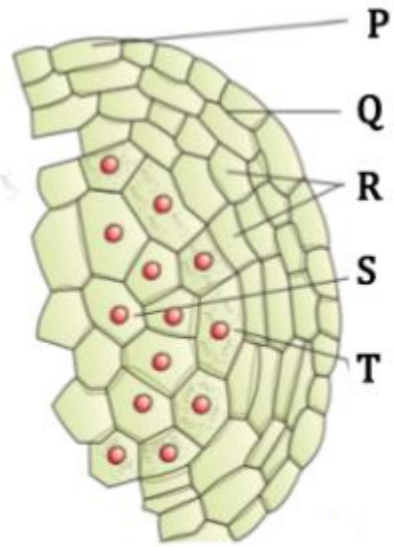
Label	Sterile	Fertile
A	Pedicel	–
C	–	Carpel
D	Calyx	–
E	–	Stamen

D.

Label	Sterile	Fertile
A	Pedicel	–
B	Calyx	–
C	–	Carpel
E	–	Stamen

BYJU'S Part Test for Board Term I (CBSE Grade 12)

8. Match the labels with their correct description in the given diagram of microsporangium showing different layers of its wall.



A.

Label	Name	Description
P	Epidermis	Outermost, protective
Q	Endothecium	Innermost wall layer
R	Microspore mother cells	Forms microsporess
S	Middle layers	Help in dehiscence of anther
T	Tapetum	Nourishes the developing pollen grains

B.

Label	Name	Description
P	Epidermis	Outermost, protective
Q	Endothecium	Protective layer
R	Middle layers	Help in dehiscence of anther
S	Microspore mother cells	Forms microspore
T	Tapetum	Innermost layer of the wall

C.

Label	Name	Description
P	Epidermis	Outermost, protective
Q	Tapetum	Nourishes the pollen grains
R	Middle layers	Help in dehiscence of anther
S	Microspore mother cells	Forms microspore
T	Endothecium	Innermost layer of the wall

D. None of the above

BYJU'S Part Test for Board Term I (CBSE Grade 12)

9. If zygote of an angiosperm has 15 pairs of chromosomes, what is the number of chromosomes in PEN?

   A. 15

   B. 30

   C. 45

   D. 60

10. The chromosome number in a root cell of a plant X is 30. What would be the chromosome number in the cell of (i) endothecium, (ii) primary sporogenous cells of microsporangium, (iii) microspore?

   A. i-30, ii-30, iii-30

   B. i-30, ii-30, iii-15

   C. i-30, ii-15, iii-15

   D. i-15, ii-15, iii-15

BYJU'S Part Test for Board Term I (CBSE Grade 12)

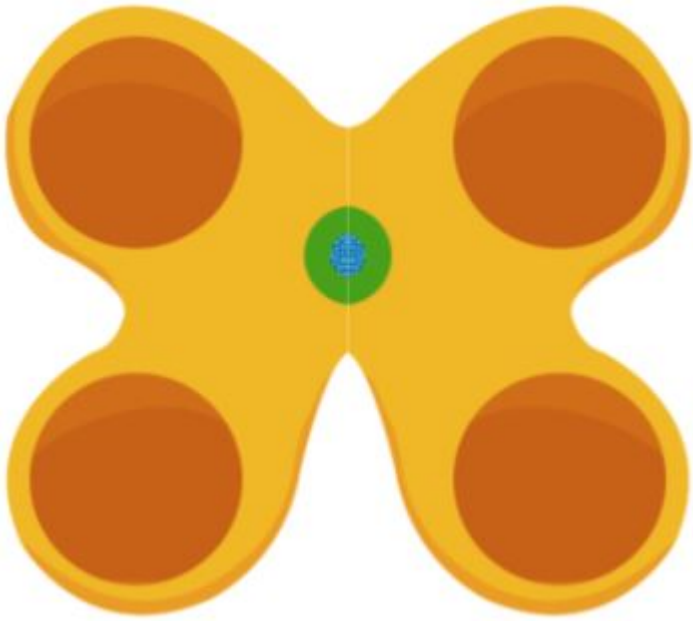
11. Which of the following is the male gametophyte in angiosperms?

A.

B.

BYJU'S Part Test for Board Term I (CBSE Grade 12)

C.



D.

12. Androgen binding protein (ABP) is secreted by which cells?

A. Sertoli cells

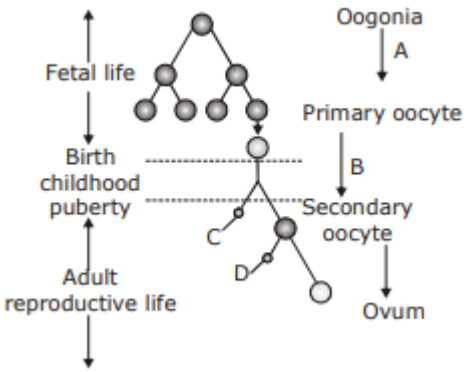
B. Leydig cells

C. Sperm

D. Follicular cell

BYJU'S Part Test for Board Term I (CBSE Grade 12)

13. Identify A, B, C and D in the schematic representation of oogenesis.



A. A-Mitosis and differentiation, B-Meiosis I and II, C-Second polar body, D-First polar body

B. A-Mitosis, B-Meiosis II, C-Ovum, D-First Polar Body

C. A-Mitosis and differentiation, B-Meiosis I, C-First polar body, D-second polar body

D. A-Meiosis I, B-Meiosis II, C- First polar body, D- Second polar body

14. Extra embryonic membranes of embryo are derived from

A. follicle cells

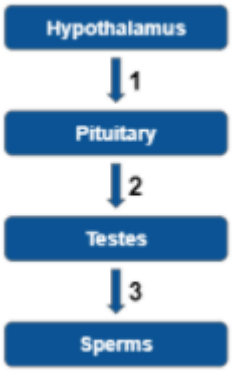
B. inner cell mass

C. formative cell

D. trophoblast

BYJU'S Part Test for Board Term I (CBSE Grade 12)

15. Study the image related to spermatogenesis and name the hormones involved at each stage of the following flow chart.



A. 1 - GnRH, 2 - LH, 3 - FSH

B. 1 - GnRH, 2 - LH, 3 - Testosterone

C. 1 - LH, 2 - FSH, 3 - GnRH

D. 1 - FSH, 2 - LH, 3 - GnRH

16. Which hormone is responsible for neuroendocrine reflex of parturition?

A. Progesterone

B. Estrogen

C. Relaxin

D. Oxytocin

17. Which among the following is not a constituent of semen?

A. Fructose

B. Citric acid

C. Sperm

D. RBC

BYJU'S Part Test for Board Term I (CBSE Grade 12)

18. Within which month of pregnancy is the foetal heart developed?

A. 1st

B. 2nd

C. 3rd

D. 6th

19. Secretions of which gland is rich in enzymes, Ca^{+2} and fructose?

A. Male accesory glands

B. Liver

C. Pancreas

D. Salivary gland

20. Which of the following does not occur during implantation?

A. The embryo secretes enzymes that digest away part of the endometrium

B. The embryo is drawn into the placenta and becomes surrounded by it

C. The embryo forms finger-like projections that burrow into the uterine wall

D. The embryo develops a hollow ball around it with a fluid-filled interior

21. The signals for parturition originates from the fully developed foetus and followed by placenta causing the mild contractions called:

A. Foetal ejection reflex

B. Embryo ejection reflex

C. Blastocoel ejaculation reflex

D. Still birth

BYJU'S Part Test for Board Term I (CBSE Grade 12)

22. Which of the following hormones' level is increased during pregnancy in the maternal blood?
(a) FSH
(b) Progestogen
(c) hCG
(d) hPL
(e) LH
(f) Estrogen

A. a, b, e, f

B. a, b, c, d, e

C. c, d, a

D. b, d, c, f

23. Which among the following are female genital organs?
(i) Vagina (ii) Penis (iii) Ovary (iv) Seminal vesicles (v) Uterus (vi) Cervix

A. (i), (ii) and (v)

B. (ii), (iii), (iv) and (v)

C. (i), (iii), (v) and (vi)

D. (iii), (iv), (v) and (vi)

24. If for some reason, the vasa efferentia in the human reproductive system get blocked, the gametes will not be transported from:

A. Vagina to uterus

B. Testes to epididymis

C. Epididymis to vas deferens

D. Ovary to the uterus

BYJU'S Part Test for Board Term I (CBSE Grade 12)

Date: 18/11/2021

Subject: Biology

Topic : Section B

Class: Standard XII

---

1. Assertion: Tapetal cells usually possess dense cytoplasm and never more than one nucleus.
   Reason: Tapetal cells undergo mitosis which generally involves division of nucleus but cytokinesis does not happen.

   A. Both assertion and reason are correct and the reason is the correct explanation to the assertion

   B. Both assertion and reason are correct but the reason is an incorrect explanation to the assertion

   C. Only assertion is correct

   D. Only reason is correct

2. Assertion (A): The decision that the plant is going to flower is taken much before the actual flowering takes place.
   Reason (R): Various hormonal and structural changes take place only after initiation of flowering.
   Select the appropriate option:

   A. Both assertion and reason are correct statements and reason is the correct explanation of the assertion

   B. Both assertion and reason are correct statements and reason is an incorrect explanation of the assertion

   C. Only assertion is correct

   D. Both assertion and reason are incorrect

BYJU'S Part Test for Board Term I (CBSE Grade 12)

3. Assertion: Government takes several measures to promote awareness about STDs.

   Reason: Overcoming the social stigma and myths about STDs is a must to avoid consequences that can be dangerous to society.

   A. Assertion and reason are true and the reason is the correct explanation
   B. Assertion and reason are true but the reason is not the correct explanation
   C. Assertion is true but the reason is false
   D. Both the statements are false

4. Assertion : When yellow bodied, white eyed Drosophila females were hybridised with brown-bodied, red eyed males; and F_1 progeny were intercrossed, F_2 ratio deviated from 9:3:3:1.
   Reason : When two genes in a dihybrid are on the same chromosome, the proportion of parental gene combinations in the offsprings are much higher than the non-parental type.

   A. Both assertion and reason are true and reason is the correct explanation of the assertion
   B. Both assertion and reason are true but reason is not the correct explanation of the assertion
   C. Assertion is true but the reason is false
   D. Assertion and reason both are false

5. One of the following did not constitute the seven contrasting pairs of characters studied by Mendel:

   A. Height of the plants
   B. Shape of the leaves
   C. Shape of a pod
   D. Colour of a pod

BYJU'S Part Test for Board Term I (CBSE Grade 12)

6. Which of the following is true for dominant and recessive relationship of allele is case of human blood groups?
(Here ' >' represents dominance over other and '=' represents co-dominance)

   A. $I^A > I^B > I^O$

   B. $I^A = I^B = I^O$

   C. $I^A > I^B = I^0$

   D. $I^A = I^B > I^O$

7. P and Q are linked genes. What shall be the genotype of progeny in cross between PQ/pq and pq/pq?

   A. PPqq and ppqq

   B. PpQq and ppqq

   C. PPQQ and ppqq

   D. None of the above

8. What is not correct with regard to Klinefelter's syndrome?

   A. Testes are reduced

   B. Genitalia is like that of males

   C. Genetic constitution is like normal female

   D. Ovaries may be present in rudimentary state

BYJU'S Part Test for Board Term I (CBSE Grade 12)

9. In case of seed colour in *Pisum sativum*, yellow colour is dominant over green colour. If the F_1 generation has 75% offspring producing yellow coloured seeds and 25% offspring producing green coloured seeds, then, which of the following statements is true about the genotype of the parents?

   A. Both the parents are homozygous

   B. Both the parents are heterozygous

   C. one of the parents is heterozygous and the other one is homozygous

   D. Difficult to predict

10. In a genetic cross involving *Antirrhinum majus*, a pink flowered plant was crossed with a white flowered one. Which among the following options are correct about the ratio of the progeny?

    A. 1 Red : 1 Pink : 1 White

    B. 2 Pink : 2 White

    C. 3 Pink : 1 White

    D. 4 White

11. Which of these is not a Mendelian disorder?

    A. Cystic fibrosis

    B. Sickle-cell anaemia

    C. Colour blindness

    D. Turner's syndrome

BYJU'S Part Test for Board Term I (CBSE Grade 12)

12. A woman heterozygous for haemophilia marries a haemophilic man. What will be the ratios of carrier daughters, haemophilic daughters, normal sons and haemophilic sons in F_1 generation?

A. 1: 2: 2:1

B. 2: 1: 1: 2

C. 1: 1: 1: 1

D. 1: 2: 1: 2

13. Phenylketonuria is an _____ disorder.

A. autosomal recessive

B. autosomal dominant

C. X - linked recessive

D. X - linked dominant

14. If gene for A and B blood group becomes incompletely dominant instead of co-dominant then how many blood groups are possible?

A. 2

B. 3

C. 4

D. 5

BYJU'S Part Test for Board Term I (CBSE Grade 12)

15. In mice, Y is the dominant allele for yellow fur and y is the recessive allele for grey fur. If Y is lethal when homozygous, then the result of cross Yy × Yy will be

    A. 3 Yellow: 1 Grey

    B. 2 Yellow: 1 Grey

    C. 1 Yellow: 1 Grey

    D. 1 Yellow: 2 Grey

16. An exception to Mendel's law of dominance was found in which of the following plants?

    A. Sweet pea

    B. Snapdragon

    C. Garden pea

    D. All of the above

17. A daughter has B blood group and her mother has O blood group. Her mother is allegedly accusing that Mr. X is her father. But court found that Mr. X is innocent directly on basis of his blood group. What blood group Mr. X would have:

    A. A

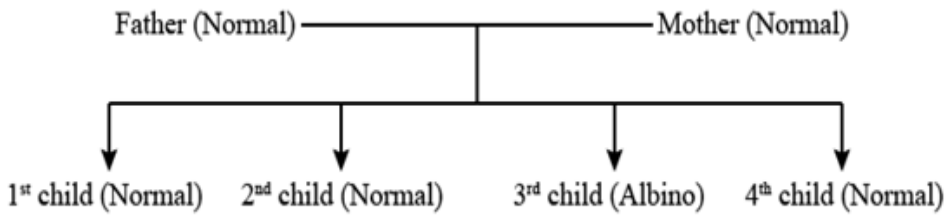
    B. O

    C. B

    D. Either A or O

BYJU'S Part Test for Board Term I (CBSE Grade 12)

18. Refer to the figure and give answer



If A = Normal allele and a = Albino allele then genotypes of father and mother are respectively

A. Aa and Aa

B. AA and Aa

C. Aa and AA

D. Aa and aa

19. A family has 5 daughters. Probability of 6th child being boy will be:

A. 1 in 2

B. 1 in 5

C. 1 in 3

D. 1 in 6

BYJU'S Part Test for Board Term I (CBSE Grade 12)

20. When one gene affects more than one phenotype, the phenomenon is called ___(**A)**___. When more than two genes affect one phenotype, the phenomenon is called __**(B)**__. Identify (A) and (B).

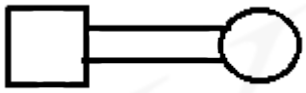
A. (A) - polygenic inheritance, (B) - pleiotropism

B. (A) - pleiotropism, (B) - polygenic inheritance

C. (A) - multiple allelism, (B) - pleiotropism

D. (A) - pleiotropism, (B) - multiple allelism

21. Which one is the incorrect match?

A. 

congsanguineous mating

B. 

female

C. 

unspecified sex

D. 

unaffected individuals

22. Mendel selected *Pisum sativum* for hybridisation experiments because of:

A. Clear contrasting characters and short life span

B. Long life span and non-fertile hybrids

C. Presence of unisexual flowers

D. Infertile hybrids and production of large number of seeds by each plant

BYJU'S Part Test for Board Term I (CBSE Grade 12)

23. Mark the correct option:
i) An oral contraceptive for females developed by CDRI, Lucknow is _____.
ii) Family planning programmes were initiated in _____.
iii) There is statutory ban (regulated by law) on _____ in India for sex determination to check increasing female foeticides.

A. i-Saheli, ii-1941, iii-amniocentesis

B. i-Saheli, ii-1951, iii-amniocentesis

C. i-Mala-D, ii-1961, iii-amniocentesis

D. i-Mala-D, ii-1971, iii-amniocentesis

24. Lactational amenorrhea is a natural method of birth control and is usually effective upto _____ after parturition.

A. two months

B. six years

C. six months

D. one year

BYJU'S Part Test for Board Term I (CBSE Grade 12)

Date: 18/11/2021

Subject: Biology

Topic : Section C

Class: Standard XII

---

1. GIFT is recommended for females with inability to

   A. produce ovum

   B. retain the foetus inside uterus

   C. provide suitable environment for fertilisation

   D. all of these

2. Case: Purebred shorthorn cattle of white coat (WW) were crossed with purebred cattle of red coat (RR). The F_1 cattle had coats with patches of white and red side by side.
   What is the phenomenon responsible for this feature?

   A. Co-dominance

   B. Multiple alleles

   C. Incomplete dominance

   D. Independent assortment

3. Case: Purebred shorthorn cattle of white coat (WW) were crossed with purebred cattle of red coat (RR). The F_1 cattle had coats with patches of white and red side by side.
   What will be the phenotypic ratio of F_2 generation?

   A. 2 : 1 : 1

   B. 1 : 1 : 2

   C. 1 : 2 : 1

   D. 1 : 1 : 1

BYJU'S Part Test for Board Term I (CBSE Grade 12)

4. Case: Purebred shorthorn cattle of white coat (WW) were crossed with purebred cattle of red coat (RR). The F_1 cattle had coats with patches of white and red side by side.
   What will be the genotypic ratis of F_2 generation?

   A. 1 : 1 : 2

   B. 1 : 2 : 1

   C. 2 : 1 : 1

   D. 9 : 3 : 3 : 1

5. Case: Purebred shorthorn cattle of white coat (WW) were crossed with purebred cattle of red coat (RR). The F_1 cattle had coats with patches of white and red side by side.

   But in certain condition, if a shorthorn cattle of white coat (WW) was crossed with a cattle of red coat (RR) resulted in all pink coated cattles. Then, what are the chances of the appearance of red coat in a cross between pink coated and white coated cattles?

   A. 25%

   B. 50%

   C. 75%

   D. 0%

BYJU'S Part Test for Board Term I (CBSE Grade 12)

6. Case: Purebred shorthorn cattle of white coat (WW) were crossed with purebred cattle of red coat (RR). The F_1 cattle had coats with patches of white and red side by side.
The same phenomenon is seen in:

   A. Height of pea plant

   B. Flower colour of snapdragon

   C. AB blood group of human

   D. All the above

7. Which of the following statements are true about HIV?

   i) HIV can be transmitted through body fluids.
   ii) HIV can be transmitted by sharing food with the infected person.
   iii) HIV can be transmitted by infected needles.
   iv) HIV can be transmitted by hugging an infected person.

   A. 1,2,3

   B. 1,4

   C. 2,4

   D. 1,3

8. What is the purpose of contraceptive pills?
   I. They inhibit ovulation and implantation.
   II. They alter the quality of cervical to prevent or retard the entry of sperms.
   III. They prevent the ejaculated semen from entering the female vagina.
   IV. They inhibit spermatogenesis.

   A. I, II and IV

   B. I, II and III

   C. I and II

   D. I, II, III and IV

BYJU'S Part Test for Board Term I (CBSE Grade 12)

9. Which period of a menstrual cycle is the fertile period?

   A. 5 - 10 days

   B. 10 - 17 days

   C. 25-28 days

   D. 1 - 5 days

10. According to the census of May 2011, the population of India was approximately:

    A. 10 billion

    B. 1.2 billion

    C. 1 million

    D. 1.2 million

11. Tubectomy is to prevent:

    A. Fertilization

    B. Coitus

    C. Egg formation

    D. Embryonic development

12. In IVF technique, a fusion of ovum and sperm occurs in:

    A. Uterus

    B. Vagina

    C. Fallopian tube

    D. Laboratory under simulated conditions