



# BIOLOGY

## BOOKS - SRIJAN BIOLOGY (ENGLISH)

### QUESTION PAPER 2022 TERM 1

#### Multiple Choice Questions

1. Which one of the following is NOT a part of a transcription unit in DNA

- A. The unducer
- B. A terminator
- C. A promoter
- D. The structural gene

**Answer:**



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2. The final proof for DNA as the genetic material came from the experiments conducted by .

- A. Waston and Crick
- B. Hershey and Chase
- C. Franklin and Wilkins
- D. None of these

**Answer:**



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**3. The codons used in chain termination are :**

**A. UAG,UAA,AUG**

B. GAT,AAT,AGT

C. AGT,TAG,UGA

D. UAA,UAG,UGA

**Answer:**



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4. A woman has normal vision, but her father is colourblind. If she marries a colourblind man, then what is the probability of her son being colourblind ?

A. 0.25

B. 0.5

C. 0.75

D. 1

**Answer:**



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**5. The genotype of plants showing dominant phenotype can be determined by :**

A. Test cross

B. Dihybrid cross

C. Pedigree analysis

D. Back Cross

**Answer:**



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6. ZZ/ZW type of sex determination of is seen in .

A. Mammals

B. Insects

C. Drosophila

D. Birds

**Answer:**



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7. The lifespan of rice plants in

A. Four years

B. One month

C. Four months

D. One year

**Answer:**



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**8.** Which of the following organisms is a seasonal breeder ?

A. Frog



B. Man

C. Ape

D. Mice

**Answer:**



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**9.** How many pollen grains will be formed after meiotic division in 25 microspore mother cells?

A. 25

B. 50

C. 100

D. 200

**Answer:**



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**10.** If the root cells of an angiosperm have 38 chromosomes, then the number of

chromosomes in the primary endosperm nucleus of this plant will be .

A. 57

B. 38

C. 19

D. 76

**Answer:**



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**11.** The main constituent of the intine layer of the pollen grain is :

A. Sporopollenin

B. Pectocellulose

C. Lignin

D. Lignopectin

**Answer:**



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12. The transparent non-cellular layer of the ovum is called :

A. Zona pellucida

B. Theca externa

C. Corona radiata

D. Granulosa laver

**Answer:**



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**13.** What is difference between Spermiogenesis and Spermiation?

A. In spermatogenesis, spermatids are formed , while in spermiation, spermatozoa are formed

B. In spermatogenesis, spermatozoa are formed, while in spermiation, spermatids

C. In Spermatogenesis, spermatozoa are released from Sertoli cells, while in

permeation, spermatozoa are formed.

D. In spermiogenesis, spermatozoa are formed, while in spermiation, spermatozoa are released from the Sertoli cells.

**Answer:**



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14. The technique used to detect the genetic defects in the developing embryo is

A. GIFT

B. Amniocentesis

C. ICSI

D. MTP

**Answer:**



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15. Which of the following is a physical contraceptive device ?

A. LNG - 20

B. Saheli

C. i-pill

D. Cervical cap

**Answer:**



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**16.** A patient brought to a hospital with myocardial infarction is immediately administered :

A. Penicillin

B. Cyclosporine - A

C. Statins

D. None of these

**Answer:**



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17. Which of the following is NOT used as a biocontrol agent for plant diseases ?

A. Baculovirus

B. Dragon fly

C. Bacillus thuringiensis

D. Trichoderma

**Answer:**



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18. In the Hardy Weinberg equation, the frequency of heterozygous individuals is represented by :

A.  $p^2$

B.  $q^2$

C.  $2pq$

D.  $pq$

**Answer:**



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**19.** Genetic drift operates in a

A. small isolated population

B. large isolated population

C. slow-reproducing population

D. morphologically similar population

**Answer:**



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20. Which of the following is not a vestigial organ of human beings?

- A. Muscles of ear pinna
- B. Nictitating membrane
- C. Vermiform appendix
- D. Eyelids

**Answer:**



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21. The abbreviation hnRNA stands for

A. Heterogeneous nucleic Ribose nucleic acid

B. Heterogeneous nuclear Ribonucleic acid

C. Heterogeneous nucleus Ribose nucleic acid

D. Homogeneous nucleic Ribose nucleic acid

**Answer:**



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22. The abbreviation IUCD stands for :

- A. Intra uterine contraceptive device
- B. Inter uterine contraceptive device
- C. Intra uterus contraceptive device
- D. Inter uterus contraceptive device

**Answer:**



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**23.** Who proposed the recapitulation theory ?

- A. Miller and Urey
- B. Sutton and Boven
- C. Emst Haeckel
- D. Oparin and Haldane

**Answer:**



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**24.** The X chromosome was discovered by :

A. Watson and Crick

B. Gregor Mendel

C. F.Griffith

D. Henking

**Answer:**



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**25.** The phase of life cycle of an organism which is characterised by gradual

deterioration of vital capacities is called \_\_\_\_\_  
phase

- A. Juvenile
- B. Vegetative
- C. Senescence
- D. Reproductive

**Answer:**



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26. The compatibility of pollen-pistil interaction is determined by \_\_\_\_\_ .

- A. Starch
- B. Special proteins
- C. Lipids
- D. Lactose

**Answer:**



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27. If the Fallopian tubes in the human reproductive system get blocked , the gametes will NOT be transported from :

- A. Ovary to uterus
- B. Epididymis to vas deferens
- C. Uterus to ovary
- D. Vas deferens to penis

**Answer:**



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28. Morula is a solid ball of \_\_\_\_\_  
blastomeres

A. 100

B. 16

C. 90

D. 64

**Answer:**



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29. Which of the following is the most important component of a contraceptive pill ?

A. FSH

B. LH

C. Progesterone

D. Thyroxine

**Answer:**



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30. A human male with an extra X-chromosomes suffers from a condition called :

- A. Down's syndrome
- B. Haemophilia
- C. Klinefelter's syndrome
- D. Turner's syndrome

**Answer:**



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31. The human genome contain more than \_\_\_ nucleotide pairs.

A. 6 million

B. 3 billion

C. 4 million

D. 5 million

**Answer:**



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32. Gene migration is also called \_\_\_\_\_.

A. Bottle -neck effect

B. Genetic erosion

C. Gene flow

D. None of these

**Answer:**



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33. Which of the following is used of the production of ethanol from starch at the industrial level ?

- A. *Bacillus their dinginess*
- B. *Saccharomyces cerevisiae*
- C. *Pencillium nolatum*
- D. *Lactobacillus bulgaricus*

**Answer:**



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34. \_\_\_\_\_ is a mutual association of fungal hyphae with the roots of higher plants.

A. Cyanocacteria

B. Rhizobium

C. Mycorrhiza

D. Nostoc

**Answer:**



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35. Which of the following statements is NOT true ?

A. Apomixis is a form of asexual reproduction.

B. Polyembryony is the development of more than one embryo in a seed.

C. Fruits formed without fertilisation are called parthenocarpic fruits.

D. Perisperm represents the persistent endosperm

**Answer:**



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**36.** Which of the following options is NOT a feature of the synthetic theory of evolution?

- A. Genetic variability
- B. Natural selection
- C. Use and disuse of organs
- D. Genetic basis of adaptation

**Answer:**



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**37.** Match column I with column II and select the correct option from the choices given below:

Gonorrhoea	(i)	HIV
Syphilis	(ii)	<i>Neisseria</i>
AIDS	(iii)	<i>Treponema</i>



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38. Match column I with column II and select the correct option from the choices given below:

Column - I		Column - II	
	Organic acid		Microbial source
(A)	Citric acid	(i)	<i>Acetobacter</i>
(B)	Acetic acid	(ii)	<i>Clostridium</i>
(C)	Butyric acid	(iii)	<i>Aspergillus</i>



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39. Which of the following animals does not have oestrous cycle ?

A. Sheep



B. Tigers

C. Dogs

D. Apes

**Answer:**



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**40.** Choose the odd one among the following with reference to microbes as biofertilizers

A. Lady bird beetles

B. Axotobacter

C. Azospirillum

D. Rhizobium

**Answer:**



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**41. Assertion :** In sickle cell anaemia the codon GAG is replaced by GUG.

**Reason :** The gene for the above mutation occurs on the Y - chromosome

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 assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

**Answer:**



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**42. Assertion :** Testes and ovaries are primary sex organs

**Reason :** Facial hair, development of chest, deepening of voice are secondary sexual organs in the females.

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 assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

**Answer:**



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**43.** Assertion : The first cell of the suspensor towards the micropyle in a dicot embryo becomes swollen to form the haustorium

Reason : The haustorium absorbs food material for the developing embryo

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

assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

**Answer:**



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**44.** Assertion : Nucleosome consists of a strand of DNA coiled around a core of histon proteins

Reason : The histon proteins forming the core

of nucleosome are four major types VIZ, H1, H2, H3 and H4.

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 assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false



**Answer:**



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**45.** Assertion : Genome similarity and universal genetic code are examples of molecular (genetic) evidences of evolution.

Reason: Molecular evidences are based on fossils found under the earth's strata.

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 assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

**Answer:**



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