

DAV ADMISSION TEST(DATCSP)

for

SUPER 40(2016-17)

(PAPER-II)

BIOLOGY

ID NO.

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SET - D

TIME : 1 HOUR

(3.00 P.M. TO 4.00 P.M.)

Guidelines to the Candidates :

1. This Booklet contains 7 printed pages and one blank page for rough work. Any defect found should be brought to the notice of the invigilator immediately.
2. Fill in the particulars in the OMR Sheet given to you separately as per the directions given therein.
3. Use Blue/Black Ball Point Pen only for writing particulars/markings responses in OMR Sheet. **Use of Pencil is strictly prohibited.**
4. This test is of **ONE** hour duration.
5. There are four choices in every question as A, B, C and D. There is only one correct response for each question. Each question carries 4 marks.
6. (i) The test consists of 20 multiple choice questions carrying maximum 80 marks.
(ii) -1 mark will be awarded for each wrong answer/multiple answer.
(iii) No mark will be awarded for any overwriting/scratching answer.
7. No candidate shall leave his/her seat during the examination.
8. Do not tear/remove any page of this booklet.
9. Calculation, if any, may be done at the blank pages of this booklet provided at the end for rough work.
10. Calculator and other electronic gadgets are not allowed.
11. After finishing the test the OMR Sheet is to be handed over to the invigilator before leaving the Examination Hall.

FASCIMILE STAMP

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1. One of the following is not double membranous structure

- (A) Mitochondrion
- (B) Vacuole
- (C) Chloroplast
- (D) Nucleus

2. What is common among Amylase, Rennin and Trypsin

- (A) These are produced in stomach
- (B) These act at a pH lower than 7
- (C) These are all proteins
- (D) These are all proteolytic enzymes

3. Kidney is made up of

- (A) Neuron
- (B) Nephron
- (C) Alveoli
- (D) Seminiferous tubules

4. Right ventricle of heart

- (A) receives blood from left ventricle
- (B) receives blood through pulmonary veins
- (C) receives deoxygenated blood
- (D) receives oxygenated blood

5. Vitamin B1 (Thiamin) is available in

- (A) Potato
- (B) Egg
- (C) Fish oil
- (D) Brown rice

6. A mutually beneficial association necessary for survival of both partners is

- (A) mutualism/symbiosis
- (B) commensalism
- (C) amensalism
- (D) both A and B.

7. Green house effect is warming due to

- (A) infra-red rays reaching earth
- (B) moisture layer in atmosphere
- (C) increase in temperature due to increase in carbon dioxide concentration of atmosphere
- (D) ozone layer of atmosphere.

8. Which organelle helps in removal of excess water
(A) contractile vacuole
(B) vacuole
(C) ribosomes
(D) protoplasm
9. Which part of plant is not affected by viral infection?
(A) Root
(B) Stem
(C) Apical meristem
(D) Leaves
10. Some bacteria can survive much below the earth surface because of the presence of
(A) cellulosic cell wall
(B) peptidoglycan in the cell wall
(C) thick cytoplasm
(D) absence of nucleus
11. Algae differ from fungi in having
(A) Oil deposits
(B) Thallus structure
(C) Unicelled sex organs
(D) Chlorophyll
12. Angiosperms differ from gymnosperms by not having
(A) ER with polysome
(B) mitochondria
(C) nucleosome
(D) flagella (cilia) in their reproductive structure
23. Which of the following statement is incorrect for echinoderms?
(A) The most distinctive feature of echinoderms is the presence of water vascular system, which is a part of the coelom
(B) The main function of water vascular system is locomotion and the capture of food
(C) Echinoderms have no proper excretory system
(D) They have well developed circulatory system
14. Which of the following group of characters is present in all chordates in some or other stage in their life?
(A) Mammary glands, hairs and gill slits
(B) Notochord, gill slits and dorsal tubular nervous system
(C) Notochord, scales and dorsal tubular nervous system
(D) Gill slits, vertebral column and notochord

15. Heterozygous tall and red flowered pea plants were selfed and total 2000 seeds are collected . What is the total number of seeds for both heterozygous traits?

- (A) 250
- (B) 500
- (C) 1250
- (D) 750

16. Genetic Engineering is associated with

- (A) developing transgenic plants
- (B) production of vaccines
- (C) gene therapy
- (D) all the above

17. Rearing of bees is called

- (A) Apiculture
- (B) apiary
- (C) silviculture
- (D) horticulture

18. Homeostasis is

- (A) tendency to change according to the change of environment
- (B) tendency to resist the change
- (C) disturbance in regulatory control
- (D) showing same growth rate.

19. Physical basis of life is

- (A) Cell
- (B) nucleus
- (C) protoplasm
- (D) DNA

20. In 1928, a scientist discovered the first effective antibiotic. Scientist and antibiotic are:

- (A) Fleming- streptomycin
- (B) Fleming- penicillin
- (C) Waksman- penicillin
- (D) Waksman-streptomycin

21. Science of engineering and technology which is applied to life sciences is

- (A) Biotechnology
- (B) Genetic engineering
- (C) Pathology
- (D) Genetics

22. Choose the correct pair
(A) Sericulture-fish
(B) Pisciculture- silkworm
(C) Apiculture-honeybee
(D) Silviculture- silkworm
23. Animals not possessing a fixed body temperature are called
(A) Homeotherms
(B) Mexotherms
(C) Poikilotherms
(D) Heterotherms
24. In banana, edible part is
(A) fleshy epicarp
(B) rudimentary mesocarp and fleshy endocarp
(C) fleshy mesocarp and endocarp
(D) pericarp.
25. Edible part of cashew nut is
(A) Fruit wall
(B) whole fruit
(C) fleshy endosperm
(D) cotyledons
26. Interbreeding between two populations can occur if they belong to the same
(A) family
(B) genus
(C) species
(D) order
27. Gir forest is famous for
(A) Tiger
(B) Elephant
(C) Lion
(D) Rhinoceros
28. All the following viruses are disseminated throughout the body except one:
(A) HIV
(B) HBV
(C) Rabies virus
(D) Human *Papilloma* virus.

29. Which of the following is a rootless aquatic plant in which a portion of the leaf forms a tiny sac for trapping insects?
- (A) Utricularia
 - (B) Drosera
 - (C) Nepenthes
 - (D) Dioneae
30. Which was absent in the atmosphere at the time of origin of life?
- (A) NH_3
 - (B) H_2
 - (C) O_2
 - (D) CH_4 .
31. Which of the following is the correct group of vestigial organs in man?
- (A) nictitating membrane, ear muscles, eyelids and coccyx
 - (B) appendix, coccyx, ear muscles and elbow joint
 - (C) wisdom tooth, coccyx, body hair and ear muscles
 - (D) wisdom tooth, body hairs, nictitating membrane and vermiform appendix.
32. During dark phase of photosynthesis _____ is oxidized and _____ is reduced
- (A) CO_2 and Water
 - (B) Water and CO_2
 - (C) Water and NADP
 - (D) NADPH_2 and CO_2
33. Which of the following gas would disappear from the atmosphere if all the photosynthetic activities were to stop?
- (A) Nitrogen
 - (B) Carbondioxide
 - (C) Hydrogen
 - (D) Oxygen
34. Parthenogenesis is the development of new individual from:
- (A) Single gamete without fertilization.
 - (B) Fertilization of a male gamete by another male gamete.
 - (C) Fertilization of a female gamete by another female gamete.
 - (D) Vegetative organs.

35. How many meiotic divisions are required to produce 40 zygotes of frog?
(A) 50
(B) 20
(C) 10
(D) 80
36. Total 512 seeds are collected from the cross $WwYy \times WwYy$. Find the number of plants produced with first dominant and second recessive trait
(A) 288
(B) 96
(C) 32
(D) 320
37. In a cross between a pure tall pea plant with green pod and a pure short plant with yellow pod, how many short plants out of 16 would you expect in F_2 generation?
(A) 9
(B) 4
(C) 3
(D) 1
38. Male sex is determined in human zygote by
(A) Nutrition of mother
(B) Strength of father
(C) Chromosome composition of egg
(D) Chromosome composition of sperm
39. Which of the following statements are true about Endoplasmic Reticulum? (a) Smooth Endoplasmic Reticulum makes lipids. (b) It is also called the control center of the cell. (c) It processes carbohydrates. (d) It modifies chemicals that are toxic to the cell.
(A) a, b and c
(B) a, c and d
(C) a and d
(D) all are correct
40. Which of the following statements are true about Eukaryotes? (a) They are cells with a nucleus. (b) They are found both in humans and multicellular organisms. (c) Endoplasmic reticulum is present in Eukaryotes. (d) All have chemically complexed cell wall.
(A) a, b and c
(B) a, c and d
(C) a, b and d
(D) all are correct