પ્રશ્ન પેપરનો સેટ નંબર જેની સામેનું વર્તુળ OMR શીટમાં ઘટ્ટ કરવાનું રહે છે.
Set No. of Question Paper, circle against which is to be darken in OMR sheet.

056(E)

(FEBRUARY-MARCH, 2026)
SCIENCE STREAM
(CLASS - XII)

01

Part - A : Time : 1 Hour / Marks : 50

Part - B : Time : 2 Hours / Marks : 50

(Part - A)

Time : 1 Hour]   *[Maximum Marks : 50*

Instructions :

1) There are 50 objective type (M.C.Q.) questions in Part - A and all questions are compulsory.

2) The questions are serially numbered from 1 to 50 and each carries 1 mark.

3) Read each question carefully, select proper alternative and answer in the O.M.R. sheet.

4) The OMR sheet is given for answering the questions. The answer of each question is represented by (A) O, (B) O, (C) O, (D) O. Darken the circle ● of the correct answer with ball-pen.

5) Rough work is to be done in the space provided for this purpose in the Test Booklet only.

6) Set No. of Question Paper printed on the upper-most right side of the Question Paper is to be written in the column provided in the OMR sheet.

7) For diagram/chart based questions, separate questions are given for blind students.

8) In this Question paper for Part - A Question No. 21(B) and 47(B) are for blind students. Only They have to attend them. For these questions the sequence of Question No. 21 and No. 47 are same for General and blind students in the OMR.

9) If more than one circle is ● darkened for one answer, the answer will be considered invalid.

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1) At the Micropyler end, Egg apparatus is constitute by the fusion of which cells?

(A) 2 Male gamates and one egg cell

(B) One Male gamate and 2 egg cells

(C) 2 synergid cells and one egg cell

(D) 2 synergid cells and one Male gamate

Rough Work

2) What is the number of chromosomes in primary oocytes and first polar body respectively.

(A) 23, 46

(B) 46, 23

(C) 23, 23

(D) 46, 46

3) Which of the following is an example of hormone releasing IUDs.

(A) Multiload 375

(B) Lippes loop

(C) LNG - 20

(D) Projestogen

4) Which Disorder is caused by Autosomal dominant trait?

(A) Myotonic dystrophy

(B) Sickle cell anaemia

(C) Phenylketonuria

(D) Haemophilia

5) If in any Double helix DNA the percentage of Adenine is 35 then what will be the percentage of cytocine in that DNA?

(A) 35%

(B) 70%

(C) 15%

(D) 65%

2

6) Which Gas is not used in Miller's experiment?

(A) H_2S

(B) NH_3

(C) H_2O

(D) CH_4

7) _____ is a very effective sedative and very useful in patients who have undergone surgery.

(A) Heroin

(B) Merijuana

(C) Barbiturates

(D) Morphine

8) Match the Column - A with Column - B and choose the correct option.

Column - A		Column - B	
(1)	Lactobacillus	(a)	Cyclosporin - A
(2)	Trichoderma polysporum	(b)	Clot buster
(3)	Streptococcus	(c)	Ethanol
(4)	Saccharomyces cerevisiae	(d)	Curd

(A) (1 - b), (2 - a), (3 - d), (4 - c)

(B) (1 - d), (2 - a), (3 - b), (4 - c)

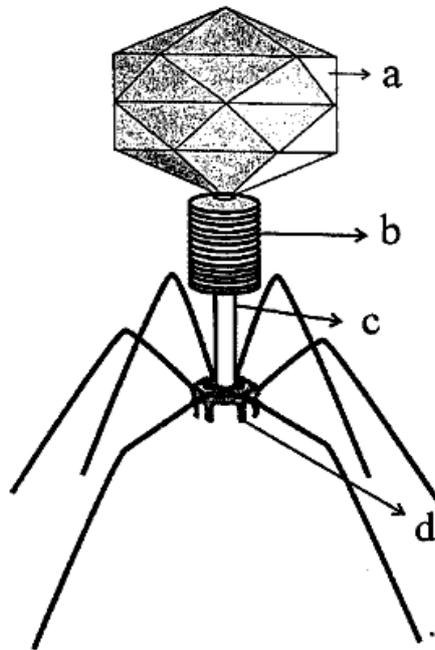(C) (1 - d), (2 - b), (3 - c), (4 - a)

(D) (1 - a), (2 - b), (3 - c), (4 - d)

3

(P.T.O.)

9) Which of the following restriction endonuclease enzyme is discover first in biotechnology.

(A) Hind - III

(B) Hind - II

(C) Eco - RI

(D) Bam - HI

10) At present, how many recombinant therapeutics have been approved for human - use the world over.

(A) 30

(B) 12

(C) 20

(D) 24

11) Which type of population interaction occurs between sea anemone and clown fish.

(A) Mutualism

(B) Parasitism

(C) Commensalism

(D) Amensalism

12) Which of the following is not related to the structure of the Ecosystem?

(A) Productivity

(B) Degradation

(C) Conservation

(D) Energy loss

13) As we move away from the equator towards the poles _____ species of birds find in colombia, _____ species of birds find in New York and _____ species of birds find in Green land respectively.

   (A) 1200, 105, 56

   (B) 1400, 105, 55

   (C) 1400, 1200, 105

   (D) 1400, 105, 56

14) It is an example of persistent nucellus - perisperm.

   (A) Castor

   (B) Maize

   (C) Beet

   (D) Beans

15) The first movement of the foetus occurs in which month of pragnancy?

   (A) Second month

   (B) Third month

   (C) Fifth month

   (D) Sixth month

16) Which of the following is not correct for the contraceptive pills - 'Saheli'.

   (A) Non - steroidal

   (B) Take once in a week

   (C) Low contraceptive value

   (D) Few side effects

17) Who proposed the chromosomal Theory of Inheritance?

(A) De - Vries and Correns

(B) Walter Sutton and Theodore Boveri

(C) Mendel

(D) Lengdom Down

18) Which scientist proposed the thought of central Dogma?

(A) Fredric Missor

(B) Mourish Wilkins

(C) James Watson

(D) Francis Crick

19) Select the brain capacity of Homo erectus, Neanderthal man and Homo habilis respectively.

(A) 1400 CC, 900 CC, 650 CC

(B) 900 CC, 650 CC, 1400 CC

(C) 650 CC, 1400 CC, 900 CC

(D) 900 CC, 1400 CC, 650 CC

20) Which of the following is a primary Lymphoid organ?

(A) Spleen

(B) Thymus

(C) Tonsils

(D) Small intestine

6

21) A) For General Students.

Choose the correct option for a,b,c and d from the given diagram and give the answer.

(A) a - head, b - collar, c - Tail, d - pins
(B) a - head, b - pins, c - Tail, d - collar
(C) a - collar, b - Tail, c - plate, d - prongs
(D) a - head, b - Tail, c - plate, d - pins

21) B) For blind students

Match Column - A with Column - B and choose the correct option.

	Column - A		Column - B
(1)	LAB	(a)	Laundry
(2)	Sap of palm	(b)	Swiss cheese
(3)	Propioni bacterium sharmanii	(c)	Toddy
(4)	Lipase	(d)	Increasing B_{12}

(A) (1 - d), (2 - c), (3 - b), (4 - a)
(B) (1 - b), (2 - a), (3 - d), (4 - c)
(C) (1 - c), (2 - d), (3 - a), (4 - b)
(D) (1 - a), (2 - b), (3 - c), (4 - d)

22) If we cut the vactor pBR322 at the place of Bam -HI and make a recombinant DNA from it. Then for which antibitic it remains resistance?

(A) Ampicillin

(B) Tetracycline

(C) Kanamycin

(D) Chloramphenicol

23) The method of producing thousands of plants through tissue culture is known as _____

(A) Somaclones

(B) Micro propagation

(C) Totipotency

(D) Explant

24) Choose the correct equation of Exponential Growth.

(A) $\dfrac{dN}{dt} = rN$

(B) $\dfrac{dT}{dN} = rN$

(C) $\dfrac{dN}{dt} = rN\left(\dfrac{K-N}{N}\right)$

(D) $\dfrac{dN}{dt} = rN\left(\dfrac{N-K}{K}\right)$

8

25) Arrange the following steps in the process of decomposition in chronological order.

   (A) Fragmentation → leaching → catabolism → huminification → mineralisation

   (B) Fragmentation → catabolism → huminification → leaching → mineralisation

   (C) Fragmentation → leaching → huminification → catabolism → mineralisation

   (D) Fragmentation → catabolism → leaching → huminification → mineralisation

26) In India, How many wildlife sancturies are there?

   (A) 448

   (B) 446

   (C) 447

   (D) 450

27) Assertion (A) : The microsporangia develop further and become pollen sacs.

   Reason (R) : Innermost layer of the microsporangium is tapetum

   (A) A is correct, R is wrong

   (B) A and R both are correct, R is not correct explanation of A

   (C) A and R both are correct R is correct explanation of A

   (D) A is wrong, R is correct

28) Government of India legalised MTP in which year?

   (A) 1970

   (B) 1971

   (C) 1950

   (D) 1951

29) Which process is used when we want to know the Genotype of an unknown flower?

(A) Incomplete Dominance

(B) Dihybrid Experiments

(C) Monohybrid Experiments

(D) Test cross

30) Which of the following answer is correct if the Template chain of DNA having the sequence TGCATGC of Nitrogen base then what will be the correct sequence of the Nitrogen base in mRNA?

(A) ACGTACG

(B) ACGUACG

(C) ACGATCG

(D) UGCATGC

31) A single step large mutation is known as _____ for speciation.

(A) Migration

(B) Gene flow

(C) Genetic drift

(D) Saltation

32) Which of the following is an example of cynobacteria?

(A) Oscillatoria

(B) Spirullina

(C) Azospirillum

(D) Azotobacter

33) In the process for the biolistics which metal is used for the coating?

(A) Iron

(B) Nickle

(C) Tungsten

(D) Silver

34) Which transgenic animal is being used to test the safety of the polio vaccine?

(A) Monkey

(B) Rabbit

(C) Mice

(D) Sheep

35) If in any pond there were 60 Lotus plants Last year and through reproduction 24 new plants are added, then what will be the birth rate of offspring per Lotus per year?

(A) 2.4

(B) 0.4

(C) 1.4

(D) 0.2

36) What is the percentage of Photosynthetically Active Radiation (PAR) in the plant of the incident solar radiation?

(A) 50%

(B) 12%

(C) 2 - 10%

(D) 20%

37) Sacred groves are found _____

(A) Hills in Meghalaya

(B) Hills in Asam

(C) Hills in Uttar Pradesh

(D) Hills in Punjab

38) Which of the following is posses only cross - pollination?

(A) Self in - compatibility

(B) Self compatibility

(C) Self fertilisation

(D) Bisexual flower

39) In which method a sperm is directly injected into the ovum?

(A) IUI

(B) GIFT

(C) ICSI

(D) ZIFT

40) 'The code is nearly Universal'. It is a exception for which of the following?

(A) Drosophilla

(B) Bacteria

(C) Human

(D) Protozoans

41) Which of the following is an example of fish like reptiles during evolution that went back from Land into water to evolve?

(A) Tyrannosaurus

(B) Pelycosaurs

(C) Archaeopteryx

(D) Ichthyosaurs

42) The value of BOD is _____ in polluted water and _____ in drinkable water.

(A) Low, High

(B) High, Low

(C) Low, Low

(D) High, High

43) Which of the following is known as 'molecular scissors'?

(A) Taq polymerase

(B) Palindromic sequence

(C) Restriction Enzymes

(D) Recombinant DNA

44) From the transgenic animal, which human protein is used for the treatment of emphysema?

(A) α - lactalbumin

(B) Thyroxin

(C) α - 1 - antitrypsin

(D) Insulin

45) Choose the correct equation for population growth.

(A) $N_{t+1} = N_t [(B + D) - (I + E)]$

(B) $N_{t+1} = N_t + [(B + D) - (I + E)]$

(C) $N_{t+1} = N_t + [(B + I) - (D + E)]$

(D) $N_{t+1} = N_t [(B + I) - (D + E)]$

46) The annual net primary productivity of the whole biospere is approximately _____

(A) 150 billion tons

(B) 160 billion tons

(C) 170 billion tons

(D) 180 billion tons

47) A) **For General students**

Choose the correct option for given diagram.

(A) Multicarpellary, apocarpous gynoecium

(B) Multicarpellary, syncarpous gynoecium

(C) Monocarpellary, apocarpous gynoecium

(D) Monocarpellary, syncarpous gynoecium

47) **B)** **For blind students**

Which of the following is not a water pollinated plant?

(A) Lotus

(B) Zostera

(C) Vallisneria

(D) Hydrilla

48) Which one is the correct option for sterilisation?

(A) Prevent the formation of Gamete

(B) Block the transport of Gamete

(C) Prevent the fertilisation of Gamete

(D) This method is done in only female

49) When the first non - cellular forms of life could have originated?

(A) 3 billion years ago

(B) 2 billion years ago

(C) 4 billion years ago

(D) 4.5 billion years ago

50) Which of the correct option for the treatment of Adenosine Deaminase deficiency (ADA)?

(A) Surgery

(B) Gene Therapy

(C) Immunisation

(D) Radio Therapy

056(E)

(FEBRUARY-MARCH, 2026)
SCIENCE STREAM
(CLASS - XII)

(Part - B)

Time : 2 Hours]   *[Maximum Marks : 50*

Instructions :
1) Write in a clear legible handwriting.
2) There are three sections in Part - B of the question paper and total 1 to 27 questions are there.
3) All the Sections are compulsory. Internal options are given.
4) The numbers at right side represent the marks of the question.
5) Start new section on new page.
6) Maintain sequence.
7) For diagram/chart based questions, separate questions are given for blind students.
8) In Given question paper Question No. 10(B), 16(B), 23(B), 24(B) and 27(B) are for the blind students only.

SECTION - A

[16]

■ Answer Questions No. 1 to 12 as directed. Attempt any Eight.

(Each question carry 2 marks).

1) Write down the economic importance of pollen grains.

2) Write down the difference between the word - 'Nirodh and Condom'. Give their importance also.

3) Write down the special features of commelina flowers.

4) Explain Lactational amenorrhea.

5) Write down about the incomplete dominance, if starch grain size is considered as the phenotype in pea plant.

6) Explain : Monocistronic structural Gene.

7) Write down any two factors that can affect Hardy Weinberg equlibrium in detail.

8) Write down the name of pathogen and symptoms of the disease which causes amoebiasis.

9) Write down the importance of bacteria and cynobacteria that are use in organic farming.

10) A) **For General Students**

Draw a diagram of population growth curve for Logistic growth also write down the equation of it.

10) B) **For blind students**

Explain : Logistic growth with equation.

11) Explain : Gause's 'Competitive Exclusion Principle'.

12) Explain : Primary productivity.

SECTION - B

[18]

■ **Answer question no 13 to 21 as directed. Attempt any Six.**

(Each Question carry 3 marks)

13) Explain the external genitalia of female.

14) Write down the Biochemical characterisation of Transforming principle.

15) Explain : Adaptive Radiation.   https://www.gujaratboardonline.com

16) A) **For General Students**

Draw : 'Life cycle of plasmodium' by a neat and labelled diagram only.

16) B) **For blind students**

Explain : Life cycle of plasmodium in detail.

17) Write down about the Bio-gas plant. (Diagram is not required)

18) Explain : Genetically Engineered Insulin.

19) Explain : Bio-Piracy.

20) By taking a small pond as an example, write down a complex interaction in an aquatic ecosystem.

21) Write down the 'rivet popper hypothesis' used by ecologist Paul Ehrlich.

SECTION - C

[16]

■ **Answer Question No. 22 to 27 in detail, Attempt any four.**

(Each Question carry 4 marks)

22) Explain the various events during a menstrual cycle. (Diagram not needed)

23) A) **For General Students**

Write down the events starts from formation of zygote to implantation in Human with diagram.

23) B) **For blind students**

Write down the events starts from fertilisation to the implantation in Human.

24) A) **For General Students**

Explain : Replication of Retrovirus with the help of neat and labelled diagram only.

24) B) **For blind students**

Write down reasons for transmission of HIV - infection and also the prevention of AIDs.

25) Write down the different techniques for transform the Recombinant DNA into the Host.

26) Explain : Haemophilia and Phenylketonuria.

27) A) **For General Students**

Explain : Mendel's monohybrid experiments and low of Dominance.

27) B) **For blind students**

Explain : Co-dominance.