

EVERWIN MATRIC. HR. SEC. SCHOOL

03.07.19 T.T Biology Time: 45 Mins
 Std: XII (B,D,E) Bio-Botany Marks: 30
 I. Choose the correct answer: 2x1=2

- The number of chromosomes in a diploid cell of *Drosophila* is
 a) 6 b) 8 c) 10 d) 12
- _____ was the first to suggest occurrence of distinct pairs of chromosomes.
 a) Sutton b) Boveri c) Montgomery d) Morgan

II. Answer any four of the following: 4x2=8

- What is Synteny?
- List out the importance of crossing over.
- Parallelism between Mendelian factors and chromosomal behaviour.
- Differentiate between linkage and crossing over.
- List out the salient features of the chromosomal theory of Inheritance.

III. Answer any one in detail: 1x5=5

- Explain the mechanism of crossing over.

(or)

Write the steps involved in molecular mechanism of DNA recombination with diagram.

Bio-Zoology

I. Answer any two of the following: 2x2=4

- Write a note on Amniocentesis to detect disorders.
- Write a note on foetoscope.
- Write a note on ultra sound method to detect disorders.

II. Answer any two of the following: 2x3=6

- Write a note on Rh factor hypothesis by Fisher and Race.
- Write a note on Wiener's hypothesis.
- Explain Erythroblastosis foetalis.

III. Answer any one in detail: 1x5=5

- Explain multiple alleles in A,B,O Blood group.
- Explain Heterogametic males.

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03.07.19 T.T Commerce Time: 45 Mins
 Std: XII (H,I,J) Marks: 40
 I. Choose the correct answer: 15x1=15

- Management is an _____.
 a) art b) science c) both a and b
- Scientific Management is developed by _____.
 a) Taylor b) Mayo c) Fayol
- What is the primary functions of management?
 a) Planning b) Controlling c) Innovating
- Gen 'Z' = _____
- MBE = _____
- MBO = _____
- NIM = _____
- KRA = _____
- _____ is a market for long term finance.
 a) Money market b) Capital market c) Debt market
- When the NSEI was established?
 a) 1992 b) 1997 c) 1998

11. Match the following:

- | | |
|---|---------------------------------------|
| a) Availability of resources | a) KRA |
| b) Fix objectives at lower level | b) Appraisal of Activities |
| c) Why the business is started and exist? | c) Matching resources with objectives |
| d) Identify the reasons for failure | d) Setting subordinates targets |
| e) Profitability and innovation | e) Defining organisational objectives |

II. Answer the following:

- Explain the various disadvantages of MBO. (8 Marks)
- What are the benefits of MBO? (8 Marks)
- What are the objectives of MBO? (4½ Marks)
- Discuss the disadvantages of MBE. (4½ Marks)

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03.07.19 T.T Computer Science Time: 45 Mins

Std: XII (B,D,E) Marks: 30

I. Answer any four of the following: 4x2=8

1. Write the syntax of if.....else statement.
2. Define control structure and write its type.
3. Write a program to check whether the given character is a vowel or not.
4. Write a note on pass statement.
5. What is the output of the following program.

for i in range (2, 10, 2):

print (i, end=' ')

else:

print ("\n All has done")

II. Answer any four of the following: 4x3=12

6. Distinguish between break and continue statement.
7. Explain the sequential statement with example.
8. Write the syntax of while loop with example.
9. Write a note on range () in loop.
10. Write the syntax of Branching statement.

III. Answer any two in detail: 2x5=10

11. Write a program to display the pattern:

A B C D E

A B C D

A B C

A B

A

12. Write a program to check if the given number is a palindrome or not.

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03.07.19 T.T Maths Time: 45 Mins

Std: XII (A,C) Marks: 30

I. Choose the correct answer: 5x1=5

1. If $\frac{z-1}{z+1}$ is purely imaginary then $|z|$ is _____.

- a) $\frac{1}{2}$ b) 1 c) 2 d) 3

2. The principal argument of $\frac{3}{-1+i}$ is _____.

- a) $\frac{-5\pi}{6}$ b) $\frac{-2\pi}{3}$ c) $\frac{-3\pi}{4}$ d) $\frac{-\pi}{2}$

3. The value of $\left(\frac{1+\sqrt{3}i}{1-\sqrt{3}i}\right)^{10}$ is _____.

- a) $\text{cis } \frac{2\pi}{3}$ b) $\text{cis } \frac{4\pi}{3}$ c) $-\text{cis } \frac{2\pi}{3}$ d) $-\text{cis } \frac{4\pi}{3}$

4. If α and β are the roots of $x^2+x+1=0$, then $\alpha^{2020} + \beta^{2020}$ is

- a) -2 b) -1 c) 1 d) 2

5. The principal argument of $(\sin 40^\circ + i \cos 40^\circ)^5$ is

- a) -110° b) -70° c) 70° d) 110°

II. Answer any three of the following: 3x2=6

6. Obtain the cartesian equation for the locus of $z=x+iy$ in $|z-4|=16$

7. Find the modulus of $\frac{2+i}{-1+2i}$

8. Find the square root of $6-8i$

9. Obtain the cartesian form of $\bar{z}=z^{-1}$.

III. Answer any three of the following: 3x3=9

10. If $z=x+iy$ is a complex number such that $\text{Im}\left|\frac{2z+1}{iz+1}\right|=0$, show that the locus of z is $2x^2+2y^2+x-2y=0$.

11. Show that the equation $z^2=\bar{z}$ has four solutions.

12. If $|z|=3$, show that $7 \leq |z+6-8i| \leq 13$

13. Show that equation $|3z-6+12i|=8$ represent a circle and find its centre and radius.

IV. Answer any two of the following: 2x5=10

14. If z_1, z_2, z_3 are three complex numbers such that $|z_1|=1, |z_2|=2, |z_3|=3$ and $|z_1+z_2+z_3|=1$ show that $|9z_1z_2+4z_1z_3+z_2z_3|=6$.

15. For any 2 complex numbers z_1 and z_2 such that $|z_1|=|z_2|=1$ and $z_1z_2 \neq -1$ then show that $\frac{z_1+z_2}{1+z_1z_2}$ is a real number.

16. Obtain the cartesian equation of





- i) $|z+i|=|z-1|$ ii) $|2z-3-i|=3$

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03.07.19 T.T Economics Time: 45 Mins

Std: XII (F,G) Marks: 40

I. Choose the correct answer: 18x1=18

1. $GNP = \underline{\hspace{2cm}} + \text{Net factor income from abroad.}$
a) NNP b) NDP c) Personal income d) GDP
2. The financial year in India is _____.
a) April 1 to March 31 b) March 1 to April 30
c) March 1 to March 16 d) January 1 to December 31
3. Frictional unemployment is otherwise called as _____.
a) Disguised b) Seasonal c) Educated d) Temporary
4. J.B.Say is a _____ economist.
a) Neo classical b) Classical c) Modern d) New
5. Structural unemployment is a feature in a _____.
a) Static Society b) Socialist Society c) Mixed economy
d) Dynamic society
6. Which of the following is Aggregate supply?
a)  b)  c)  d) 
7. According to classical theory, rate of interest is a reward for
a) Investment b) Demand c) Capital d) Saving
8. J.M.Keynes is one of the greatest and most influential economists of the mid _____ century.
a) 19th b) 20th c) 21st d) 15th
9. Expand MEC.
10. National income is measured by using _____ methods?
a) 2 b) 3 c) 4 d) 5
11. The average income of the country is _____.
a) Personal income b) Per capita income
c) Inflation Rate d) Disposal income
12. _____ occurs when more people are there than what is actually required.
a) Educated unemployment b) Technical unemployment
c) Disguised unemployment d) Structural unemployment
13. J.B.Say was a _____ economist.
a) Italian b) Russian c) American d) French
14. Which is the assumptions of the Say's law of market?
a) Long run analysis b) Short run analysis
c) Government intervention d) Price is fixed
15. _____ flexibility brings equality between saving and investment.
a) Demand b) Supply c) Capital d) Interest

16. Expand $C+I+G+(X-M)$.

17. Which is a flow concept?

- a) Total wealth b) Monthly income c) Money supply
d) Number of shirts

18. Expand PQLI.

II. Answer any three of the following: 3x4=12

19. Define full employment.
 20. Give reasons for labour retrenchment at present situation.
 21. What is the main feature of rural unemployment?
 22. Give a short note on Frictional unemployment.
- III. Answer any one of the following: 1x10=10
23. Critically explain Say's law of market.
 24. Explain the differences between Classical theory & Keynes theory.