CLASS: XII DATE: 04.11.2022

JAWAHAR HIGHER SECONDARY SCHOOL – NEYVELI REVISION EXAM – VI – 2022 - 2023 ENGLISH

MARK: 40 TIME : $1\frac{1}{2}$ hrs

JAWAHAR HIGHER SECONDARY SCHOOL CBSE, NEYVELI

CLASS: XII DATE: 04.11.2022

REVISION TEST – VI (2022 – 2023) ENGLISH Section - A

MARKS: 40 TIME: 1 ½ Hrs

Read the passage given below.

1. I got posted in Srinagar in the 1980s. Its rugged mountains, gushing rivers and vast meadows reminded me of the landscapes of my native place – the Jibhi Valley in Himachal Pradesh. Unlike Srinagar that saw numerous tourists, Jibhi Valley remained clouded in anonymity. That's when the seed of starting tourism in Jibhi was planted. I decided to leave my service in the Indian Army and follow the urge to return home.

2. We had two houses – a family house and a traditional house, which we often rented out. I pleaded with my father to ask the tenant to vacate the house so that I could convert it into a guesthouse. When my family finally relented, I renovated the house keeping its originality intact, just adding windows for sunlight.

3. I still remember the summer of 1992 when I put a signboard outside my first guesthouse in Jibhi Valley! The village residents, however, were sceptical about my success. My business kept growing but it took years for tourism to take off in Jibhi Valley. Things changed significantly after 2008 when the government launched a homestay scheme. People built homestays and with rapid tourism growth, the region changed rapidly. Villages turned into towns with many concrete buildings. Local businesses and tourists continued putting a burden on nature.

4. Then, with the 2020-21 pandemic and lockdown, tourism came to a complete standstill in Jibhi Valley. Local people, who were employed at over a hundred homestays and guesthouses, returned to their villages. Some went back to farming; some took up pottery and some got involved in government work schemes. Now, all ardently hope that normalcy and tourism will return to the valley soon. In a way, the pandemic has given us an opportunity to introspect, go back to our roots and look for sustainable solutions.

5. For me, tourism has been my greatest teacher. It brought people from many countries and all states of India to my guesthouse. It gave me exposure to different cultures and countless opportunities to learn new things. Most people who stayed at my guesthouse became my repeat clients and good friends. When I look back, I feel proud, yet humbled at the thought that I was not only able to fulfill my dream despite all the challenges, but also play a role in establishing tourism in the beautiful valley that I call home.

Based on your understanding of the passage, answer the questions as directed: (10x1=10)

A) According to the writer, what is tourism?

B) The scenic beauty of Srinagar makes the writer feel :

i) awestruck ii) nostalgic iii) cheerful iv) confused

C) A collocation is a group of words that often occur together. The writer says that Jibhi valley remained clouded in anonymity. Select the word from the options that correctly collocates with clouded in.

i). disgust ii) anger iii) doubt iv) terror

D) Which signboard would the writer have chosen for his 1992 undertaking, in Jibhi Valley?



i) option 1 ii) option 2 iii) option 3 iv) option 4

E) What is the impact of home stay scheme launched by the Government?

F) Find out the world which is similar in meaning 'not easily convinced' (para -3)

- G) The writer mentions looking for sustainable solutions . He refers to the need for sustainable
 - solutions because he realises that:

i) even though all natural ecosystems are essential pillars of resilience, we need to focus on using their resources to address the economic needs of mankind, as a priority.

ii) the exposures to pandemics are a reality and a big threat to the countries across the world.

iii) for an economic recovery to be durable and resilient, a return to 'business as usual' and environmentally destructive investment patterns and activities must be avoided.

iv) there is an increasing urgency in the climate movement and the need for collaborative action for the future.

- H) Select the option that list the customer review for the writer's project.
 - i) Beautiful accommodation in the lap of nature, Luxurious cottage with indoor pool and garden.
 - ii) Comfortable and peaceful. Neat room with ample sunlight. Pleasant and warm host.
 - iii) Enjoyed the sprawling suite on the fifth floor. Great view. Professional service.
 - iv) Remote locale, good food and clean room. Would have loved more natural sunlight, though.
- I) Which Quote summarises the writer's feeling about the pace of growth of tourism in Jibhi Valley.i) We kill all the caterpillars, then complain there are no butterflies. John Marsden
 - ii) Nature will give you the best example of life lessons, just open your eyes and see. Kate Smith
 - iii) We do not see nature with our eyes, but with our understanding and our hearts. William Hazlett
 - iv) I'd rather be in the mountains thinking of God than in church thinking of the mountains. John Muir
- J) Select the option that lists what we can conclude from the text.
 - 1) People of Jibhi Valley practiced sustainable tourism.
 - 2) The people of Jibhi valley gradually embraced tourism.
 - 3) Tourists never revisited Jibhi Valley.
 - 4) The writer was an enterprising person.
 - i) (1) and (2) are true.
 - ii) (2) (3)and (4) are true.
 - iii) (2) and (4) are true.
 - lv) (1), (3) and (4) are true

SECTION – B

2. You are Sooraj / Janushree. Your friend Manav from Mumbai is staying in a paying guest accommodation Invite him to join Diwali celebration with you at your residence.

(5marks)

SECTION – C

3. Extract (Read the extracts to attempt the questions with reference to context)

"A girl from the countryside, she hadn't gone through all the stages of worldly experience that generally precede a position of importance and sophistication that she had found herself catapulted into. She never quite recovered from the terror she felt that day. That was the end of a brief and brilliant career — the legal adviser, who was also a member of the Story Department, had unwittingly brought about that sad end. While every other member of the Department wore a kind of uniform — khadi dhoti with a slightly oversized and clumsily tailored white khadi shirt — the legal adviser wore pants and a tie and sometimes a coat that looked like a coat of mail. Often, he looked alone and helpless …

(Poets and Pancakes) (6x1=6)

i) Select the option that completes the given sentence appropriately. 'Stages of worldly experience' in the given context would refer to .

- A. good education to gain knowledge.
- B. situations that require one to be street smart.
- C. smaller, not so important roles in acting.
- D. training in soft skills
- ii) Select the suitable word from the extract to complete the following analogy : sealed : closed : propelled : _____.

iii) Select the correct option to fill in the blank.

The harm done to the actress was a/an _____.

- A. well-planned act
- B. unintentional act
- C. act of jealousy
- D. act of male dominance
- iv) Based on the above extract, choose the statement that is TRUE for the legal adviser.
- A. He disliked the actress from the countryside.
- B. He acted after thinking through things carefully.
- C. He did not gel well with others in the Department.
- D. He was always dressed smartly.

v) Name the Writer _____

vi) Identify from the extract, the textual clue that allows the reader to infer that the writer is sympathetic towards the professional fate of the actor

[Clue: a phrase]

4. Read the extract given below and answer the question that follow:

"You are well" Sado agreed, He lowered his voice, "You are so well that I think if I put my boat on the shore to night, with food and extra clothing in it, you might be able to row to that little island not from the coast. It is so near the coast that it has not been worth fortifying. Nobody lives on it because in storm it is submerged. But this is not the season of storm. You could live there until you saw a Korean fishing boat pass by. They pass quit near the island because the water in many fathoms deep there'

"The young man stared at him, slowly comprehending. 'Do I have to? He asked'

" I think so. " Sadoo said gently" you understand - it is not hidden that you are here."

A) The arrangements of food and clothing by Dr. Sa	doo portrays him as:
i) a kind of compassionate person	i) an experienced sailor
iii) a good event organizer	v) a good advisor
B) Not been worth fortifying indicates that it	
i) Had been left uncared for and neglected	ii) Can be easily spotted by the Korean boats
III) Will be easy for the white man to enter the	ISIAND IV) IS dangerous to stay there alone
C) "But this is not the season of storm ." Dr. Sadao t	ries to!
I) explain the situation II) assur	e nim of safety
D) " " it is not hidden you are here" Dr. Sedee	ay his knowledge
i) to explain why be cannot stay there anymo	s internion is.
ii) to remind him that he has tried to hide his	nresence
iii) to explain that it is necessary and good fo	r both of them
iv) to assert that his house is not a hiding pla	ce
5. Answer the following questions	(5x2=10)
1) Write about the eminent character of Mr. S	S.S.Vasan?
2) Who was Subbu's enemy? Why?	
3) How did Hana help Dr. Sadoo?	
How does the writer indicate that Dr. Sado	o's father was a very traditional and conventional
man?	
What is the fiery misery to those subjected	I to pancake make up?
6. Answer the following questions:	(1x5=5)
i) What were the positive qualities of Subbu t	hat the writer admired?
B) 'Not been worth fortifying indicates that it	
i) Had been left uncared for and neglected	ii) Can be easily spotted by the Korean boats
III) Will be easy for the white man to enter the	island IV) is dangerous to stay there alone
C) "But this is not the season of storm ." Dr. Sadao t	ries to!
iii) equests him on elimete	e nim of safety
D) " " it is not hidden you are here" Dr. Sadoo	ay his knowledge
i) to explain why be cannot stay there anymo	
ii) to remind him that he has tried to hide his	nresence
iii) to explain that it is necessary and good fo	r both of them
iv) to assert that his house is not a hiding pla	ce
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3) How did Hana help Dr. Sadoo?	
How does the writer indicate that Dr. Sado	o's father was a very traditional and conventional
man?	
5) What is the fiery misery to those subjected	I to pancake make up?
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D) (Net been worth fortifying indicates that it	
i) Had been left uncared for and pedlected	ii) Can be easily spotted by the Korean boats
iii) Will be easy for the white man to enter the	island iv) is dangerous to stav there alone
C) "But this is not the season of storm." Dr. Sadao t	ries to!
i) explain the situation ii) assur	re him of safety
iii) educate him on climate iv) displ	av his knowledge
D) "" it is not hidden you are here". Dr. Śadoo	's intention is:
i) to explain why he cannot stay there anymo	re.
ii) to remind him that he has tried to hide his	presence
iii) to explain that it is necessary and good fo	r both of them
iv) to assert that his house is not a hiding pla	ce
5. Answer the following questions	(5x2=10)
1) Write about the eminent character of Mr. S	S.S.Vasan?
2) Who was Subbu's enemy? Why?	
3) How does the writer indicate that Dr. Cade	o's fother was a very traditional and some stick -
4) now does the writer indicate that Dr. Sado	os latiter was a very traditional and conventional
111d11 : 5) What is the fient misery to those subjected	to nancake make un?
6 Answer the following questions:	10 parloane mane up: (1v5=5)
i) What were the positive qualities of Subbut	hat the writer admired?

CLASS: XII DATE: 11.11.2022

JAWAHAR HIGHER SECONDARY SCHOOL – NEYVELI REVISION EXAM – VI – 2022 - 2023 MATHEMATICS

SECTION – A

MARKS: 40 TIME : $1\frac{1}{2}$ hrs (4 X 1 = 4)

1. The anti derivative of
$$(\sqrt{x} + \frac{1}{\sqrt{x}})$$
 equals
(a) $\frac{1}{3}x^{1/3} + 2x^{1/2} + C$ (b) $\frac{2}{3}x^{2/3} + \frac{1}{2}x^2 + C$
(c) $\frac{2}{3}x^{3/2} + 2x^{1/2} + C$ (d) $\frac{3}{2}x^{3/2} + \frac{1}{2}x^{1/2} + C$
2. $\int \frac{3x^2 + 3^x \log^x}{3^x + x^3} dx$
(a) $3^x + x^3 + C$ (b) $\log|3^x + x^3| + C$ (c) $3x^2 + x^3\log_e 3$ (d) $\log|3x^2 + 3^x\log_e 3| + C$
3. $\int e^x \left(\frac{1-x}{1+x^2}\right)^2 dx$
(a) $\frac{e^x}{1+x^2} + C$ (b) $\frac{-e^x}{1+x^2} + C$ (c) $\frac{e^x}{(1+x^2)^2} + C$ (d) $\frac{-e^x}{(1+x^2)^2} + C$
4. $\int e^x(1 - \cot x + \cot^2 x) dx$
(a) $e^x \cot x + C$ (b) $e^x \csc x + C$ (c) $-e^x \csc x + C$ (d) $-e^x \cot x + C$

ASSERTION – REASON BASED QUESTION

(2 X 1 = 2)

In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.

(a) Both A and R are true and R is the correct explanation of A $% \mathcal{A}$

(b) Both A and R are true but R is not the correct explanation of A

(c) A is true but R is false

(d) A is false but R is true

- 5. Assertion (A) : $\int x^x (1 + \log x) dx = x^x + C$ Reason (R) : $\frac{d}{dx} (x^x) = x^x (1 + \log x)$
- 6. Assertion (A) : $\int x^2 dx = \frac{x^3}{3} + C$ Reason (R) : $\int e^{x^2} dx = e^{x^{3/3}} + C$

7. Integrate the function: $(4x + 2)\sqrt{x^2 + x + 1}$

8. Find the integral of $tan^3 2x \sec 2x$

9. Find: $\int \frac{(x-3) e^x}{(x-1)^3} dx$

10. Find: $\int \frac{dx}{\sqrt{5-4x-2x^2}}$

11. Integrate the function: $\int \sin^{-1} (2x) dx$

12. Find the integral of
$$\frac{tan^2x \sec^2 x}{1-tan^6 x}$$

13. Find : $\int e^{2x} \sin x \, dx$

14. Evaluate :
$$\int \frac{e^x}{\sqrt{5-4e^x-e^{2x}}} dx$$

SECTION – D (2 X 5 = 10)

15. Integrate the rational function : $\frac{1-x^2}{x(1-2x)}$

16. Find the value of $\int \frac{x+2}{\sqrt{x^2+5x+6}} dx$

SECTION – E

(2 X 2 = 4)

CASE – BASED QUESTION:

17. Integration is the process of finding the anti derivative of a function. In this process, we are provided with the derivative of a function and asked to find out the function. Integration is the inverse process of differentiation.

Let f(x) be a function of x. If there is a function g(x), such that $\frac{d}{dx}[g(x)] = f(x)$, then g(x) is called an integral of f(x) with respect to x and is denoted by $\int f(x)dx = g(x) + C$, where C is constant of integration.

Based on the given information, answer the following questions:

(i) Evaluate : $\int \frac{(x+1)^2}{x(x^2+1)} dx$

(ii) Evaluate : $\int sin^2 x \, dx$

JAWAHAR HIGHER SECONDARY SCHOOL – NEYVELI **REVISION EXAM - VI - 2022 - 2023** PHYSICS

MARK: 35 TIME : 1_{1/2} hrs

SECTION - A

- (9 X 1 = 9)
- 1. If an \propto Particle collides head on with a nucleus, what is impact parameter? (c) $10^{-10} m$ (d) 10¹⁰m (b) Infinite (a) Zero

CLASS: XII

DATE: 07.11.2022

- 2. Find the ratio of de Broglie wavelength associated with two electron beams accelerated through 25 V and 36 V respectively.
 - (a) 6:5 (b) 5:6 (c) 25:36 (d) 36:25
- 3. The graph between intensity of light falling on a metallic plate (I_n) with the current (i) generated is



- 4. A Light having wavelength 300 nm falls on a metal surface. Work function of metal is 2.54 ev, What is the stopping potential?
 - (b) 2.59 V (d) 1.29 V (c) 1.60 V (a) 2.3 V
- 5. If λ_1 and λ_2 are the wavelengths of the first members of Lyman and paschen series respectively then λ_1 : λ_2 is (d) 7:108 (a) 1:3 (b) 1.30 (c) 7:50
- 6. If the wavelength of an electromagnetic radiation is doubled, What will happen to the energy of photons? (a) Energy will be same (b) Energy will be doubled
 - (c) Energy will become half (d) Energy becomes zero

Direction: In each of the following questions, a statement of Assertion (A) is given followed by a corresponding statement of Reason (R), just below it of the statement, mark the correct answer as

- (a) If both assertion and reason are true and reason is the correct explanation of assertion
- (b) if both assertion and reason are true but reason is not the correct explanation of assertion
- (c) If assertion is true but reason is false
- (d) If both assertion and reason are false
- 7. Assertion : Photoelectric effect demonstrates the wave nature of light
 - Reason : The number of photoelectrons is proportional to the frequency of light
- 8. Assertion : Total energy of an electron in a hydrogen atom is negative
- : Electron is bounded in the nucleus Reason
- 9. Assertion : The de Broglie equation has significance for any microscopic or sub microscopic particle Reason : The de Broglie wavelength is inversely proportional to the mass of the object if velocity is constant

SECTION - B

(4 X 2 = 8)

- 10. Draw the graph showing the variation of photoelectric current with anode potential of a photocell for (i) the same frequencies but different intensities $I_3 > I_2 > I_1$ of incident radiation. (ii) the same intensity but different frequencies $\vartheta_3 > \vartheta_2 > \vartheta_1$ of incident radiation.
- 11. (a) Define photoelectric work function
 - (b) Two metals A and B have work functions 4 ev and 10 ev respectively. Which metal has higher threshold wavelength.
- 12. (a) What do you mean by matter waves? (b) Derive de - Broglie wave equation for material particles
- 13. (i) State the limitation of Rutherford's atomic model. (ii) What is the angular momentum of an electron in the third orbit of an atom

- 14. (a) Write three characteristics features in photoelectric effect which can not be explained on the basis of wave theory of light, but can be explained only using Einstein's equation?
 - (b) Two beams, one of red light and the other of blue light of the same intensity are incident on a metallic surface to emit photoelectrons. Which one of the two beams emit electrons of greater kinetic energy.

15. In the study of a photoelectric effect the graph between the stopping potential V and frequency ϑ of the incident radiation on two different metals P and Q is shown below.



- (a) Which one of the two metals has higher threshold frequency?
- (b) Determine the work function of the metal which has greater value?
- (c) Find the maximum kinetic energy of electron emitted by the light of frequency $8 \times 10^{14} HZ$ for the metal Q in electron volt.
- 16. (i) State the postulates of Bohr's theory of hydrogen atom.
 - (ii) The energy levels of an atom of element are shown in the diagram. Which one of the level transitions will result in the emission of photons of wavelength520 *nm*? Why?



- 17. (a) State the laws of photoelectric emission
 - (b) Derive Einstein's photoelectric equation.
 - (c) Light of wavelength $5000A^{\circ}$ falls on a metal surface of work function 1.9 ev. Find,
 - (i) energy of photons in ev. (ii) the K.E of photoelectrons and (iii) stopping potential

18. Case based question:

The observations on photoelectric effect clearly indicated that when light interact with matter it behaves as if it was made of discrete packets of energy called quanta. Photons are electrically neutral and are not deflected by electric and magnetic field. The frequency of photon does not change as it travels from one medium to another but the speed of the photon changes as it travels through different media due to change in it's wavelength.

(a) Rest mass of photon is

(i)
$$1.6 \times 10^{-31} kg$$
 (ii) Zero (iii) $9.1 \times 10^{-31} kg$ (iv) $1.6 \times 10^{-27} kg$

(b) Photoelectric emission is possible only when

- (i) Incident frequency is greater than threshold frequency
- (ii) Incident frequency is less than threshold frequency
- (iii) Incident frequency is equal to threshold frequency
- (iv) Maximum energy is negative
- (c) The wavelength of a photon needed to remove a proton from a nucleus which is bound to the nucleus with 1 Mev energy is nearly.
 - (i) $3.2 \ nm$ (ii) $4.1 \times 10^{-2} \ nm$ (iii) $1.2 \times 10^{-3} \ nm$ (iv) $1 \times 10^{-9} \ nm$

(d) If the intensity of incident light is doubled, the kinetic energy will be

(i) half (ii) double (iii) remains the same (iv) $\frac{1}{4}th$ of original value

CLASS: XII	JAWAHAR HIGHER SECONDA REVISION EXAM -	ARY SCHOOL – NEY • VI – 2022 – 2023	(VELI MARK: 35
DATE: 31.10.2022	CHEN	MISTRY	TIME : $1\frac{1}{2}$ hrs
	SECT	ION – A	-
I. Answer the following	g questions:		(5 X 1 = 5)
1. $(CH_3)_3 CNH_2$ is (a) Primary amine	 (b) Secondary amine	(c) ter – amine	(d) none
2. Identify the incorrect (a) $(C_2 H_5) N (CH_3)_2$ (b) $CH_3 - CH_2 - CH_2$ (c) $(CH_3)_3 NH_2$ (d) $CH_3 - (CH_2)_2 NH_2$	IUPAC name $\longrightarrow N, N - \text{dimethyl Ethanamine}$ $I(NH_2) - CH_3 \longrightarrow N - \text{Meth}$ 2 - Methyl propan - 2 - amine $H_2 \longrightarrow \text{propan} - 1 - \text{amine}$	e nyl propanamine	
 The most convenien (a) Gabriel Phthalim (c) Hoffmann's react 	t method to prepare primary amine ide synthesis (b) Ca ion (d) Ga	containing one carbon a rbylamine reaction tterman's reaction	atom less is
4. Assertion (A) : Arom Reason (R) : Aryl h	atic 1° – amines can be prepared b alides do not undergo nucleophilic s	y Gabriel Phthalimide s substitution with anion f	ynthesis ormed by Phthalimide
(a) Both A & R a (b) Both A & R a (c) A is true bu (d) A is false and	re true and R is the correct explanation are true but R is not the correct explan t R is false d R is true	on of A ation of A	
5. Assertion (A) : PK_b of Reason (R) : The lor	aniline is higher than ethylamine ne pair of $-NH_2$ group in aniline is inve	olved in conjugation with	a benzene ring
(a) Both A & R a (b) Both A & R a (c) A is true bu (d) A is false and	re true and R is the correct explanation are true but R is not the correct explan t R is false d R is true	on of A ation of A	
	SECT	ION – B	
II. Give reason for the	following questions each carry t	wo marks:	(6 X 2 = 12)
6. Give reason for the f (a) 1° – Amines hav	ollowing: /e higher boiling point than 3° – ami	nes	

- (b) Diazonium salts of aromatic amines are more stable than those of aliphatic amines
- 7. Give one chemical test to distinguish
 - (a) Methyl amine and dimethylamine
 - (b) Write the IUPAC name of



and $(CH_3)_2 N C_6 H_5$

8. Write a note on Gabriel phthalimide synthesis

- 9. In the following cases rearrange the compounds as directed
 - (a) In an increasing order of basic strength $C_6 H_5 NH_2$, $C_6 H_5 N (CH_3)_2$, $(C_2 H_5)_2 NH$ and $CH_3 NH_2$
 - (b) In an increasing order of PK_b values $C_2 H_5 NH_2$, $C_6 H_5 NH CH_3$, $(C_2 H_5)_2 N$ and $C_6 H_5 NH_2$

10. Give the structure of A, B and C in the following reactions.

$$C_6 H_5 NO_2 \xrightarrow{Fe/HCl} A \xrightarrow{HNO_2} B \xrightarrow{C_6H_5OH} C$$

11. Complete the following reactions:

(a)
$$C_6 H_5 NH_2 + CH Cl_3 + alc .KOH \rightarrow$$

(b)
$$CH_3 CH_2 Br \xrightarrow{(i) KCN}{(ii) LiAlH_4}$$

III. Answer the following questions each carries 3 MArks:

12. Write a note on (a) Hoffmann bromamide reaction

- (b) Coupling reaction
- (c) Sandmeyer's reaction
- 13. Write the structures of different isomers corresponding to the molecular formula. $C_3 H_9 N$. Write the IUPAC names of the isomers which will liberate nitrogen gas on treatment with nitrous acid.
- 14. (a) An aromatic carboxylic acid "A" on treatment with aqueous ammonia and heating forms compound "B". Which on heating with Br_2 and KOH forms a compound "C" of molecular formula $C_6 H_7 N$. Write the structures and IUPAC names of compounds A, B and C.
 - (b) Write a note on Diazotisation

SECTION - D

15. Read the passage carefully and answer the questions that follow:

Amines are treated as the alkyl derivatives of Ammonia. These are obtained by replacing one, two or three are H – atoms from ammonia by the same number of alkyl groups. Depending upon the number of alkyl groups attached to N – atom amines are classified as primary, secondary and tertiary amines. Amines are weak Lewis bases as there is a lone pair of electrons on N – atoms. Methylamine and ethylamines are gases at room temperature. Higher amines may be volatile liquids. These compounds can associative in nature. Hence they have higher boiling pointsthan the corresponding alkanes of comparable moleculae masses.

Answer the following questions:

(a) Arrange $CH_3 NH_2$, $(CH_3)_2 NH$ and $(CH_3)_3 N$ in increasing order of basic strength in aqueous medium (b) Which is more acidic aniline or ammonia?

(c) Why amines are basic in nature

(d) Among $(CH_3)_3N$ and $(CH_3)_2 NH$ which amine is more basic and why?

SE	CTION – E	(5 Marks)		
16. (a) How aniline reacts with (i) Henisberg reagent	(ii) Br ₂ /water	(iii) CH ₃ CO Cl		
(b) Convert nitromethane to dimethylamine				

(4 Marks)

JAWAHAR HIGHER SECONDARY SCHOOL – NEYVELI REVISION EXAM – VI – 2022 - 2023

BIOLOGY

TIME : $1\frac{1}{2}$ hrs

MARK: 35

CLASS: XII DATE: 14.11.2022

General instructions:

- (i) Question paper comprises five sections A , B , C , D and E.
- (ii) There are 16 questions. All questions are compulsory.
- (iii) Section A has 5 questions of 1 marks each, Section B has 6 questions of 2 marks each Section – C has 3 questions of 3 marks each, Section – D has 1 questions of 4 marks (case – based) and Section – E has 1 question of 5 marks.
- (iv) Wherever necessary, neat and properly labelled diagram should be drawn.

SECTION – A

- 1. The DNA molecule to which the gene of interest is integrated for cloning is called as (a) carrier (b) transformer (c) vector (d) host
- 2. While isolating DNA from bacteria, which of the following enzymes is not required(a) lysozyme(b) protease(c) ribonuclease(d) deoxyribonuclease
- 3. An antibiotic resistance gene in a vector usually helps in the selection of
 - (a) Competent bacterial cell (c) Recombinant bacterial cell
- (b) Transformed bacterial cell (d) Selectable marker
- 4. Which of the following statement does not hold true for restriction enzyme.
 - (a) If recognizes a palindromic nucleotide sequences
 - (b) It is an endonuclease
 - (c) It is isolated from virus
 - (d) It produces same kind of sticky ends in different DNA molecule
- 5. Sticky ends form ______ with their complementary cut counterparts.
- (a) Hydrogen bonds (b) Phosphodiester bond
- (c) Covalent bond (d) lonic bond

SECTION – B

- 6. Name the enzymes that help in forming recombinant DNA
- 7. Expand Eco RI
- 8. What are the three basic steps to be followed during genetic modification of an organism?
- 9. What are bioreactors? Name the components of simple stirred tank bioreactors?
- 10. Name the enzyme that are used to digest the membrane of the following organism to isolate DNA (a) Fungal cell (b) Bacterial cell (c) Plant cell (d) Animal cell
- 11. Restriction enzymes should not have more than one site of action in the cloning site of a vector. Comment.

SECTION - C

- 12. What do you mean by insertional inactivation? Explain by anexample.
- 13. How does Agrobacterium tumefaciens acts as a suitable vector in biotechnology experiments?
- 14. Study the diagram and answer the following questions.



- (a) Name the technique. Why is it done?
- (b) At which end the sample is loaded?
- (c) Analyse the reason for different positions taken by the DNA bands.
- (d) Write the steps followed to visualise DNA bands.

SECTION - D

15. Given below is the diagram of E.Coli cloning vector PBR322. Analyse and answer the following questions



- (a) Identify A , B , C and D
- (b) If we ligate foreign DNA at site B in the above vector, the recombinant will not grow in which medium? Why?
- (c) Name the gene that controls the copy number of the vector in the host cell. What does 'Rop' stand for (d) Write the recognition site of Eco RI. Where does it cut the sequence?

SECTION – E

16. Many copies of a specific gene of interest are required to study the detailed sequencing of bases in it. Name and explain the process that help in developing large number of copies of this gene of interest invitro with a neat diagram.

JAWAHAR HIGHER SECONDARY SCHOOL - NEYVELI REVISION EXAM - VI (2022 - 2023) COMPUTER SCIENCE

MARK: 35 TIME : $1\frac{1}{2}$ hrs

$(6 \times 2 = 12)$

SECTION - A

- 1. Define the Terms Relation, Domain, Tuples, Attributes.
- 2. What are Data types in RDBMS ? What are the main objectives of datatypes?
- 3. Differentiate between Primary key and Candidate keywith respect to databases.
- 4. i) Write a command to Create a Database 'JHSS' and to view the list of all databases? ii) Write Mysql commands used to Change the database 'JHSS' and to view the list of tables stored in 'JHSS' database ?
- 5. i) What is dual table? How would you calculate 15*3 in SQL? ii) Give output for the following . select 22/7 as pi;
- 6. Differentiate between CHAR and VARCHAR data types.

SECTION – B

- 7. What are aggregate functions? What is their use? Give example
- 8. Explain Alternate key, Foreign key with example?
- 9. Write the output of the queries (a) to (d) based on the table, SPORTS given below:

TABLE: SPORTS						
STUDENTNO	CLASS	NAME	GAME1	GRADE	GAME2	GRADE
10	7	Sameer	Cricket	в	Swimming	А
11	8	Sujit	Tennis	Α	Skating	С
12	7	Kamal	Swimming	в	Football	в
13	7	Veena	Tennis	С	Tennis	Α
14	9	Archana	Basketball	А	Cricket	А
15	10	Arpit	Cricket	А	Athletics	С

- a. SELECT COUNT(*) FROM SPORTS
- b. SELECT COUNT(NAME) FROM SPORTS
- c. SELECT DISTINCT (CLASS) FROM SPORTS
- d. SELECT COUNT(DISTINCT CLASS) FROM SPORTS

e. SELECT NAME FROM SPORTSWHERE GAME1=GAME2;

f. SELECT GAME1, GAME2 FROM SPORTSWHERE NAME LIKE ' A%';

10. Consider the above RELATION SPORTS (Ref Q. no - 9)

- (a) Identify the degree and cardinality of the RELATION SPORTS.
- (b) Identify the candidate key(s) from the RELATION **SPORTS**.
- (c) Is there any Alternate key found by you from the above Table **SPORTS**. Justify your answer.
 - 11. Consider the following Relation CABHUB

CABHUB					
VCODE	VEHICLENAME	MAKE	COLOR	CAPACITY	
100	Innova	Toyato	White	7	
102	Sx4	Susuki	Blue	4	
104	C class	Mercedes	Red	4	
105	A stra	Susuki	White	3	
108	Indigo	Tata	Silver	3	

- i. To display the names of all the red coloured vehicles.
- To display the name of vehicle, make, and capacity of vehicles in ascending order of their ii. seating capacity.

SECTION - C

- iii. Write a guery to create a Relation CABHUB
- Insert first two records with relevant information, in the table. iv. (1)
 - 12. a) Differentiate between DDL and DML commands?
 - b) Add column customerID in CABHUB Relation(Ref Q. no 11)
 - c) Delete a column COLOR from CABHUB Relation.

(1x 5 = 5)

(1)

13. a) Write a program to implement the stack using list. b) Write about stack and Queue data structure? Expand LIFO , FIFO

 $(6 \times 3 = 18)$