

Serial No. Of the Answer Book

Roll No. (in figure)

(in Words)

Superintendent Seal & Signature

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PHYSICS-I

Total Time: 3 Hours

Max: Marks: 85

Note: There are THREE Section of this Paper i.e. A, B and C, attempt each according to the given instructions.

Time: 20 Minutes

SECTION-A

Marks: 18

Note: Attempt all parts of section - A Section -A must be return to the superintendent after 20 minutes even if you have not attempted any question. Overwriting/ defacing/Cutting etc is prohibited in Section-A and no credit will be given to such answer.

I. Write the correct option i.e. A/B/C/D in the empty boxes.

- i. The SI unit of time is
(A) 86400 seconds in a mean solar day (B) 1/60 minute
(C) The cesium second (D) second measured by digital watch
- ii. If 4.865 and 3.64 are the two significant numbers then their product in significant digits will be.
(A) 17.7086 (B) 17.709 (C) 17.70 (D) 17.7
- iii. The magnitude of the resultant of the two forces is F. the magnitude of each force is F. the angle between the forces must be.
(A) 45° (B) Zero (C) 60° (D) 120°
- iv. The torque acting on a uniformly rotating body is.
(A) Constant > zero (B) $rF \sin\theta$ (C) Zero (D) $r F \cos\theta$
- v. In a projectile motion the vertical component of velocity.
(A) Remains constant (B) Decreases with time (C) Increases with time (D) Changes uniformly.
- vi. When a rocket is fired vertically up wards its velocity with the lapse of time.
(A) Increases (B) Decreases (C) Remains constant (D) None of them
- vii. The ability of a body to do work is called
(A) Force (B) Power (C) Energy (D) Momentum
- viii. An elevator starts its motion down wards with an acceleration of 4m/se^2 . The apparent Weight of a Passenger in it will.
(A) Increase (B) Decrease (C) Un change (D) Negative
- ix. The linear and angular velocities of a particle, moving in a circle of radius r are related by.
(A) $V = W \times r$ (B) $V \times W = r$ (C) $v = r \times w$ (D) $w \times v = r$
- x. Equation of continuity is based on the law of conservation.
(A) Mass (B) Energy (C) Momentum (D) All of these
- xi. The frequency of a pendulum is 0.5 hertz. Its time period will be.
(A) 1.2 sec (B) 2.0 sec (C) 2.8 sec (D) 3.4 sec
- xii. Standing waves transport.
(A) Matter (B) Energy
(C) Both matter and energy (D) Neither matter nor energy.
- xiii. In a transverse wave the distance between a crest and a trough is equal to.
(A) 2λ (B) $\lambda/2$ (C) λ (D) $\lambda/4$
- xiv. Two light waves which are no phase coherent can not.
(A) be diffracted (B) interfere (C) polarize (D) All of these
- xv. The least distance of distinct vision for normal eye is equal to.
(A) 10cm (B) 15cm (C) 20cm (D) 25cm
- xvi. In young's double slits experiment if d is the seperation between the slits, then the fringes space is given by.
(A) $D\lambda/d$ (B) $\lambda D/d$ (C) $\lambda d/D$ (D) $d\lambda/2D$
- xvii. Which one of the following processes is irreversible process.
(A) Compress of gas (B) Firing of rifle (C) Compress of spring (D) Melting of ice
- xviii. The process in which no heat energy flows in to or out of the system is called.
(A) Isothermal process (B) Adiabatic process (C) Isochoric process (D) Isobaric process

Note: time allowed for section B and C is 2 hours and 40 minutes

SECTION "B"

Marks: 40

II: Attempt any TEN Parts out of the following. Each Part carries equal marks.

- i. What do you mean by dimensions of a physical quantities. Check the formula $v = \sqrt{FL/m}$ Is dimensionally correct.
 $\rightarrow \wedge \wedge \wedge \wedge \rightarrow \wedge \wedge$
- ii. If $A = I + J + K$ and $B = I - J$, then show that the two vectors are orthogonal.
- iii. Show that torque can be expressed as the product of force and its moment arm.
- iv. The force between the Pair of protons is repulsion, Does the P.E increase as the pair Of protons is brought closer?
- v. Can the velocity of an object reverse direction, when acceleration is constant. Explain
- vi. When water falls from a tap its crosssectional area decreases as it comes down, why?
- vii. How are beats useful in tuning a musical instrument?
- viii. The body of a bus vibrates when it travels at a particular speed. Explain.
- ix. What is meant by the resolving power of a diffraction grating?
- x. What are the conditions for steady state interference of light?
- xi. Why do astronomers prefer reflecting telescope over refracting telescope?
- xii. Why must more work be done when a gas is heated at constant pressure than at constant volume?
- xiii. Why does an astronaut in on orbiting satellite feel weightless?

SECTION "C"

Marks: 27

Note: Attempt any THREE questions of the following. Each question carries equal Marks.

- III:(a) Explain the scalar and vector products of two vectors. And give two examples of each. 5
 $\rightarrow \wedge \wedge \wedge \wedge \rightarrow \wedge \wedge \wedge$
- (b) Find the angle between the two vectors A and B where 4
 $A = 3i + 6j + 9k$ and $B = 2i + 3j + k$.
- IV:(a) Define terminal velocity and show that the terminal velocity of a spherical droplet is directly proportional to the square of its radius. 5
- b) The radius of a small fog droplet is $5.0 \times 10^{-6} \text{ m}$, If the co-efficient of viscosity of the air is $1.9 \times 10^{-5} \text{ kg/m.se}$, then find the terminal velocity of the droplet in the air. 4
- V.(a) What is Doppler Effect? Obtain expressions for the frequency of sound heard when. 5
 - i) Source moves towards a listener at rest.
 - ii) Listener moves towards a source at rest.
- b) Two tuning forks A and B produce four beats per second. on loading A slightly we get beats per second. What is the frequency of A before and after loading, If the frequency of B is 256 Hz ? 4
- VI: Write short but comprehensive notes on any two of the following.
 - a) Diffraction of X-rays by crystal. 4. 1/2
 - b) Simple pendulum. 4.1/2
 - c) Artificial gravity. 4.1/2
 - d) First law of thermodynamics. 4.1/2

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MATHEMATICS-I

Total Time: 3 Hours

Max: Marks: 100

Note: There are THREE Section of this Paper i.e. A, B and C, attempt each according to the given instructions.

Time: 20 Minutes

SECTION-A

Marks: 20

Note: Attempt all parts of section - A Section -A must be return to the superintendent after 20 minutes even if you have not attempted any question. Overwriting/ defacing/Cutting etc is prohibited in Section-A and no credit will be given to such answer.

I. Write the correct option i.e. A/B/C/D in the empty boxes.

- i. $(\sqrt{-1})^2 =$
(A) 1 (B) -1 (C) $\sqrt{1}$ (D) $\sqrt{-1}$
- ii. $(A \cup B) =$ where A & B are any two sets.
(A) $\overline{A \cap B}$ (B) $(A \cap B)$ (C) $\overline{A \cap B}$ (D) None
- iii. If A is a square matrix of n with complex entries and if $(A)^t = A$ then A is called.
(A) Skew symmetric (B) Hermitian (C) skew Hermitian (D) none
- iv. Sum of the fourth roots of unity is
(A) 1 (B) -1 (C) 0 (D) None
- v. If $b^2 - 4ac > 0$, then the roots are
(A) equal (B) rational (C) real & unequal (D) None
- vi. Arithmetic mean between two numbers $4\sqrt{5}$ and $2\sqrt{5}$ is
(A) $6\sqrt{10}$ (B) $2\sqrt{5}$ (C) 14 (D) $3\sqrt{5}$
- vii. rational fractions are of
(A) one type (B) two type (C) three type (D) None
- viii. If A, G, H are arithmetic, geometric & Harmonic means respectively between two numbers a & b. Then which relation is true.
(A) $A > H > G$ (B) $H > G > A$ (C) $A > G > H$ (D) None
- ix. ${}^4P_4 =$
(A) 4 (B) 16 (C) 24 (D) 12
- x. ${}^9C_5 =$
(A) 116 (B) 126 (C) 136 (D) 106
- xi. For n odd in the expansion of $(a+b)^n$, the middle terms are
(A) $\frac{n+1}{2} \& \frac{n+2}{2}$ (B) $\frac{n+2}{2} \& \frac{n+3}{2}$ (C) $\frac{n+1}{2} \& \frac{n+3}{2}$ (D) $\frac{n+2}{2} \& \frac{n+4}{2}$
- xii. $\sin \theta - \sin \phi =$
(A) $2 \cos \frac{\theta+\phi}{2} \sin \frac{\theta-\phi}{2}$ (B) $2 \sin \frac{\theta+\phi}{2} \cos \frac{\theta-\phi}{2}$ (C) $2 \cos \frac{\theta+\phi}{2} \cos \frac{\theta-\phi}{2}$ (D) None
- xiii. In which quadrant ray lies if $\sin \theta > 0$ and $\cos \theta < 0$
(A) 1st (B) 2nd (C) 3rd (D) 4th
- xiv. Period of $\tan x =$
(A) $-\pi$ (B) π (C) $\frac{\pi}{2}$ (D) $-\frac{\pi}{2}$
- xv. A triang with no right angle is called
(A) Right angle triangle (B) oblique triangle (C) Parallelogram (D) None

MATHEMATICS -I

Note: time allowed for section B and C is 2 hours and 40 minutes

SECTION "B"

Marks: 50

II. Attempt any TEN Parts out of the following. Each Part carries equal marks

- i. Relate the history of π why it is an irrational number and not arational number.
- ii. Let $S = \{1, -1, i, -i\}$ show that \cdot the ordinary multiplication is the binary operation in S.
- iii. Let $A = \begin{pmatrix} -1 & 1 \\ 2 & 4 \end{pmatrix}$ show that $(A^{-1})^{-1} = A$
- iv. Evaluate $(1+w-2w^2)^5 (4+w+4w^2)^5$
- v. Decompose $\frac{1}{x^2-a^2}$ into partial fractions.
- vi. Find the sum of first 100 even positive integers.
- vii. In how many ways a team of 5 players can be chosen out of a total 9 players.
- viii. Find the middle term in the expansion of $(a/x + x/a)^{10}$
- ix. Prove that $\sec^2 \theta = 1 + \tan^2 \theta$
- x. Prove that $\sin 3\alpha = 3 \sin \alpha - 4 \sin^3 \alpha$
- xi. Find the period of $\frac{7}{2} \cot \frac{2\pi x}{3}$
- xii. Find the cube root of 126 correct to four decimal places.
- xiii. Find the exact value of $\sin(\cos^{-1} \sqrt{3}/2)$

SECTION "C"

Marks: 30

Note: Attempt any THREE questions of the following. Each question carries equal Marks.

- III. a) If $Z_1 = 2x - 3yi$ $Z_2 = 4x + 5yi$ prove that $\overline{Z_1 + Z_2} = \overline{Z_1} + \overline{Z_2}$
- b) Solve the equation $\sqrt{2x-3} + \sqrt{2x+4} = \sqrt{6x+13}$
- IV. a) Solve for X $\begin{vmatrix} x & 2 & 3 \\ 0 & -1 & 1 \\ 0 & 4 & 5 \end{vmatrix} = 9$
- b) Find the value of K if $x-2$ is a factor of the polynomial $2x^4 + x^3 + kx^2 - 8$
- V. a) If in A.P. $\frac{5m}{5n} = \frac{m^2}{n^2}$ show that $\frac{am}{an} = \frac{2m-1}{2n-1}$
- b) Prove that $\binom{n}{c-r-1} + \binom{n}{c-r} = \binom{n+1}{c-r}$
- VI. a) Find the middle term in the expansion of $(1+x)^8$
Find R, r, r_1 , r_2 and r_3 for the triangle with measures of the sides 5, 12 and 13

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xiii. پرندوں کی دنیا کا۔۔۔۔۔ ہوں میں

(الف) درویش

(ب) بادشاہ

(ج) سردار

(د) امیر

xiv. شوکت پکارتی ہے کہ بیٹے علیؑ کے ہیں، شاعر کا اشارہ کس کی طرف ہے۔

(الف) حضرت امام حسنؑ

(ب) حضرت امام حسینؑ

(ج) حضرت عباسؑ

(د) حضرت علی اکبرؑ

xv. ندیم جم نہ سکے حسن کے۔۔۔۔۔ میں ہم

(الف) قلعة

(ب) حصار

(ج) رخسار

(د) وقار

xvi. رنگ پیراہن کا خوشبو زلف لہرانے کا نام، کس شاعر کا مصرع ہے۔

(الف) میر

(ب) غالب

(ج) ندیم

(د) فیض

xvii. نظم مجاہدین اسلام کا تعلق کس غزوہ سے ہے۔

(الف) غزوہ بدر

(ب) غزوہ احد

(ج) غزوہ خندق

(د) غزوہ تبوک

xviii. نرم بستر، کون سا مرکب ہے؟

(الف) مرکب عطی

(ب) مرکب اضافی

(ج) مرکب توصیفی

(د) مرکب عددی

xix. "قرع انبیق" قواعد کی رو سے کیا ہے۔

(الف) اسم ظرف

(ب) اسم آلہ

(ج) اسم صوت

(د) اسم مکمل

xx. غزل کے آخری شعر کو کیا کہتے ہیں۔

(الف) مطلع

(ب) حسن مطلع

(ج) ردیف

(د) مقطع

اردو (لازمی)

پارٹ - ۱

نوٹ: حسب اور بج کے لئے کل وقت 2 گھنٹے 40 منٹ

حصہ ب

- ii. درج ذیل سوالات سے صرف دس کے مختصر جوابات لکھیں۔ تمام سوالات کے نمبر برابر ہیں۔
- i. حضورؐ کی سیرت پاک ہر شخص اور ہر انسانی طبقے کے لئے ہدایت و رہنمائی کا سرمایہ ہے۔ ایک جامع ہی انکشاف لکھیں۔
- ii. بڑا جب خواب سے بیدار ہوا تو اسکی ماں نے اسے کیا کہا؟
- iii. اگر حیدر راں کا آخری فیصلہ درست تھا۔ تو اسکی وجہ بیان کریں۔
- iv. پروفیسر سہیل سب کچھ دیکھتا مگر زبان نہ بلاتا۔ اس جملے میں اصل واقعہ بیان کیجئے۔
- v. ڈاکٹر سید عبداللہ کی ادبی خدمات پر نوٹ لکھیں۔
- vi. سبق کیلی ملاقات کا خلاصہ تحریر کریں۔
- vii. ہوائے بیابانی اور ضربتِ غائب میں کیا قدر مشترک ہے۔
- viii. علامہ اقبال شاہین کو کیوں پسند کرتے ہیں۔
- ix. نظم تو حیرت عظمیٰ کا مرکزی خیال تحریر کریں۔
- x. مرانہس کی شاعرانہ عظمت پر تنقیدی نوٹ لکھیں۔
- xi. دوست کے بھائی کی شادی کی روداد لکھیں۔
- xii. قربانی کے بکرے کی آپ جتنی لکھیں۔
- xiii. سابقہ اور لاحقہ کی وضاحت کریں۔
- xiv. مندرجہ ذیل محاورات کو جملوں میں استعمال کریں۔
- ہوش گم ہونا ، اوسان خطا ہونا ، آفت کا پرکالا ، تیوری چڑھانا ، ناک میں دم کرنا

حصہ ج

- iii. سیاق و سباق کے حوالے سے کسی ایک ستر پارے کی تشریح کریں۔
- الف) میلی داغی دیواروں اور جالوں بھری چھت والے اس کمرے کے دروازے پر پرانے دو بیٹے کا ایک احموراسا پردہ لٹک رہا تھا۔ جس کا ایک سر اٹھا کر کواز سے اٹکا دیا گیا تھا۔ کمرے کے ایک کونے میں ٹوٹی ہوئی ادوائن کا ایک کھٹولا پڑا تھا۔ جس پر معصوم کے ریشمی لباس کا ڈھیر رکھا تھا۔ اور پائنتی کے پاس پانچ چھ برس کا نگار ابد کھڑا چائے سے کستی ہوئی انگلیاں چوس رہا تھا۔
- ب) اور کی ناخوشی، راہ کی محنت کشتی تپ کی حرارت، گرمی کی شرارت، بیاں کا عالم، کثرت اندوہ و غم، حال کی فکر، مستقبل کا خیال، متناہی کا رنج، آوارگی کا ملال جو کچھ کہو وہ کم ہے۔
- پانچل تمام عالم کا ایک سا علم ہے۔ سنتے ہیں کہ توہم میں مہاراجہ کو اختیار ملے گا۔
- شاعر و نظم کے حوالے سے کسی ایک جز کی تشریح کریں۔
- iv. الف) بڑا بزرگ ہے یہ آرمودہ کا رہے یہ کسی مرے ہوئے گورے کی یادگار ہے یہ پرانی وضع کا بے حد عجیب جامہ ہے بہن چکا اسے خود ”واسکوڈی گاٹا“ ہے۔
- ب) بیام برنہ میسر ہوا تو خوب ہوا زبان فیر سے کیا شرح آرزو کرتے وہ جان جاں نہیں آتا تو موت ہی آتی دل و جگر کو کہاں تک بھلا بھرتے
- v. اپنے کالج کے پرنسپل کو کرکٹر سرٹیفکیٹ کی وصولی کے لئے درخواست تحریر کریں۔
- vi. ایک گاہک اور ایک دکاندار کے درمیان چٹنی کے بحران پر مکالمہ لکھیں۔

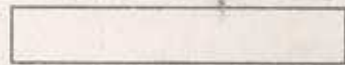


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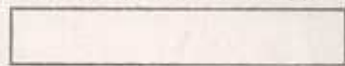
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ENGLISH-I (COMP)

Total Time: 3 Hours

Max: Marks:100

Note: There are THREE Section of this Paper i.e. A,B and C, attempt each according to the given instructions.

Time: 20 Minutes

SECTION-A

Marks: 20

Note: Attempt all parts of section – A Section –A must be return to the superintendent after 20 minutes even if you have not attempted any question. Overwriting/ defacing/Cutting etc is prohibited in Section-A and no credit will be given to such answer.

I. Write the correct option i.e. A/B/C/D in the empty boxes.

- i. The sight of the food _____ the young seagull.
(A)Frightened (B)delighted (C)saddened (D)maddened ☐
- ii. The three anglo- Indian girls were _____ over a set of pictures.
(A)giggling (B)smiling (C)staring (D)looking ☐
- iii. Entering lingkuan gorge, my _____ in creased.
(A) indignation (B)irritation (C)nervousness (D)anger ☐
- iv. A five blanket indeed must have cost a pretty _____.
(A) Price (B)worth (C)penny (D) amount ☐
- v. The landlord told us the real _____ of the fish
(A)story (B)history (C)account (D)value ☐
- vi. Rex was big and _____ and beautifully made.
(A)Stout (B)Muscular (C)Sturdy (D)Healthy ☐
- vii. Isabel was bossy but she was always _____.
(A) right (B)wrong (C)kind (D) angry ☐
- viii. Elia carai dedicated his poems to his _____.
(A)Father (B)Mother (C)Wife (D)Sister ☐
- ix. We stood quietly in _____ and the P.T began.
(A)Order (B)Uniform (C)lines (D)Rows ☐
- x. Mr. Hamel put it all into our heads at one _____.
(A)by one (B)stroke (C)step (D)command ☐
- xi. Put your white frock on with a black _____.
(A)shawl (B)shirt (C)sash (D)band ☐
- xii. The drunken old beggar" it was said by _____.
(A)Henry slater (B)Ben torden (C)Victoria (D)Elizabeth ☐
- xiii. Pythias did not like the king's _____ with damon.
(A)behavior (B)agreement (C)bargain (D)dealing ☐
- xiv. On the way, Py thias was _____ by tow robbers.
(A)robbed of (B)killed (C)wounded (D)held ☐
- xv. The girl saw in the flash of lightning a _____.
(A)dog (B)bus (C)man's face (D) girl ☐
- xvi. The schoolboy considers him self a _____.
(A)caged bird (B)Prisoner (C)Criminal (D)model ☐
- xvii. Hapiness is like a _____ on the stream.
(A)leaf (B)straw (C)fog (D)bubble ☐
- xviii. "Dust thou art" to dust _____.
(A)go (B)Move (C)returnest (D)mix ☐
- xix. The poem " one way of love" is written by _____.
(A)Tennyson (B)R. Browning (C)W.B. Yeats (D)Niathew Arnold ☐
- xx. Dinerged means _____.
(A)Cut (B)Blocked (C)divided (D)branched off ☐

111001
ENGLISH -I(comp)

Note: Time allowed for section B and C 2 hours and 40 minutes.

II. Attempt any ten questions. All questions carries equal marks. where question I, II are compulsory.

SECTION -B

Marks:50

- i) Explain with reference to the context the given stanza.
Life is real ! life is earnest !
And the grave is not its goal;
"Dust thou art, to dust returnest"
was not spoken of the soul.

OR

The work is done: grown old he thought,
According to my boyish plan;
Let the fools rage, I swerved in naught,
Some thing to perfection brought ;
But louder sang the ghost. What then?

- ii) paraphrase the following stanza.

At play and in school he would fracture each rule-
In mischief from autumn to spring;
And the villagers knew when to manhood he grew
He would never amount to a thing.

OR

My whole life long I learned to love.
This hour my utmost art I prove
And speak my passions – heaven or hell?
She will not give – me heaven ? T is well!
lose who may – I still can say !
Those who win heaven , blest are they!

- iii) What is the young seagull afraid of ?
iv) Who was giving the blanket as a gift to whom?
v) What qualities does skvortsov most prize in him self?
vi) What do you learn from the story " the foolish Quack?
vii) What does he usually do when he visits the law courts?
viii) Who is Mrs. Slater expecting and why?
ix) What does Pythias wish to do before he is put to death?
x) Does Py thias like damons bargain with the king? Why?
xi) How is the girl saved from the man?
xii) What argument does the poet give in defence of a schoolboy. That drives away all his joys.
xiii) What is the theme of the poem" one way of love"

SECTION-C

Marks:30

Note: Attempt any three of the following questions . All questions carry equal marks.

- III. a) Translate the following into Urdu.
i) I never chopped a single log for you.
ii) O, my son if you would only cure my goiter.
iii) Elia managed to get away quietly .
iv) But with great effort she had over come her misery.
v) Hesitantly, filed with terrible anguish, she asked .
b) Translate the following into English.

- (i) سورج مشرق سے طلوع ہوتا ہے۔
(ii) اگر تم محنت کرتے تو پاس ہو جاتے۔
(iii) لڑکے کیوں شور کر رہے ہیں۔
(iv) انور دس روز سے کالج نہیں آ رہا ہے۔
(v) غرور کا سر نیچا۔

iv) a) change the voice of the following.

- i) Did they catch the bus.
 - ii) Dad would marry that girl
 - iii) Lil gives her silly smile.
 - iv) Will the class be attended by him.
 - v) Let me do my duty.
- b) Fill in the blanks with appropriate preposition.
- i) He did not agree _____ my proposal.
 - ii) I'll hand you over _____ police.
 - iii) He is addicted _____ smoking.
 - iv) I have not tasted food _____ three days.
 - v) He presided _____ the meeting.

(v) a) Draw the character sketch of Abel merry weather.

b) Write the summary of the lesson "the Over coat"

(vi) Write a letter to your father informing him about your progress in studies.

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قلمیات اسلامی (لازمی) - 1

کل نمبر: 50

کل وقت: 2 گھنٹے

نوٹ: اس پرچہ کے تین حصے ہیں الف، ب، اور ج ہر حصے کو دی گئی ہدایات کے مطابق حل کریں۔

نمبر: 10

حصہ الف

وقت: 15 منٹ

نوٹ: حصہ الف کے تمام جملہ کریں، اور حصہ الف کو مقررہ وقت کے بعد پرہیز نہ کریں اگر آپ نے ایک یا دو جواب دیے ہیں تو اس کے جواب کو ان اس کے اوپر لکھنا یا مٹا دینا صحیح ہے اور اس کے نمبروں میں سے۔

I. درست جواب کا انتخاب کریں اور اپنا انتخاب ا/ب/ج/د، ہر جزو کے سامنے دیے ہوئے خالی خانے میں لکھیں۔

i. مشہور اسلامی کتابیں کتنی ہیں۔

(الف) چار (ب) چھ (ج) آٹھ (د) نو

ii. شریعت اسلامی کے بنیادی ماخذ صرف ----- ہیں۔

(الف) تین (ب) پانچ (ج) چار (د) دو

iii. امام بخاری ----- میں پیدا ہوئے۔

(الف) 194 (ب) 203 (ج) 198 (د) 199

iv. نماز کے لئے قرآن میں ----- کا لفظ آیا ہے۔

(الف) عماد (ب) صلوة (ج) الدین (د) عبادت

v. رسول کے لغوی معنی ہیں۔

(الف) انسان کامل (ب) رہبر (ج) پیغام لانے والا (د) نیک

vi. روح القدس ----- کا لقب ہے۔

(الف) اسرائیل (ب) جبرائیل (ج) مزارئیل (د) عیسیٰ

vii. جمعہ شریف کے دن غسل کرنا ----- ہے۔

(الف) سنت (ب) واجب (ج) فرض (د) مستحب

viii. قیامت کے دن سب سے پہلے کس عمل کا حساب ہوگا۔

(الف) ایمان (ب) زکوٰۃ (ج) روزہ (د) نماز

ix. کتابت قرآن کے لئے حضرت زید بن ثابتؓ کی سربراہی میں کتنے صحابہ کرامؓ پر مشتمل کمیٹی بنائی گئی تھی۔

(الف) 50 (ب) 75 (ج) 100 (د) 110

x. مدنی سورتوں کی تعداد ----- ہے۔

(الف) 28 (ب) 27 (ج) 87 (د) 30

نوٹ: حصہ ب صبح کے لئے کل وقت 1 گھنٹہ اور 45 منٹ ہیں۔

نمبر: 25

حصہ ب

II. مندرجہ ذیل میں سے پانچ (5) سوالات کے مختصر جوابات لکھیں۔ تمام سوالات کے نمبر برابر ہیں۔

- i. وحی کے لغوی اور اصطلاحی معنی لکھیں۔
- ii. زکوٰۃ کی ادائیگی کے اصول تحریر کریں۔
- iii. قرآن مجید کے اعجاز پر نوٹ لکھیں۔
- iv. مشہور ملائیکہ کے نام اور کام لکھیں۔
- v. غیبت ایک بدترین برائی ہے۔ مختصر وضاحت کریں۔
- vi. روزے کے مقاصد بیان کریں۔
- vii. غیر مسلم کے حقوق لکھیں۔

نمبر: 15

حصہ ج

نوٹ: درج ذیل میں سے کوئی سے دو سوالات کے جوابات تحریر کریں۔ تمام سوالات کے نمبر برابر ہیں۔

- III. قرآن پاک کی جمع و تدوین پر نوٹ لکھیں۔
- IV. حج کا فلسفہ کیا ہے۔ نیز اس کے انفرادی و اجتماعی فوائد بیان کریں۔
- V. ترجمہ و تشریح کیجئے۔

الف) اِنَّ اللہَ یامرُ بِالْعَدْلِ وَ الْاِحْسَانِ

ب) مَا یُرِیْہُمُ اللہُ مِنْ اٰیَاتِہِ خَمِ اَشَاس

نوٹ: حصہ ب، ج کے لئے کل وقت 1 گھنٹہ اور 45 منٹ ہیں۔

نمبر: 25

حصہ ب

II. مندرجہ ذیل میں سے پانچ (5) سوالات کے مختصر جوابات لکھیں۔ تمام سوالات کے نمبر برابر ہیں۔

- i. وحی کے لغوی اور اصطلاحی معنی لکھیں۔
- ii. زکوٰۃ کی ادائیگی کے اصول تحریر کریں۔
- iii. قرآن مجید کے اعجاز پر نوٹ لکھیں۔
- iv. مشہور ملائیکہ کے نام اور کام لکھیں۔
- v. غیبت ایک بدترین برائی ہے۔ مختصر وضاحت کریں۔
- vi. روزے کے مقاصد بیان کریں۔
- vii. غیر مسلم کے حقوق لکھیں۔

حصہ ج

نوٹ: درج ذیل میں سے کوئی سے دو سوالات کے جوابات تحریر کریں۔ تمام سوالات کے نمبر برابر ہیں۔

- III. قرآن پاک کی جمع و تدوین پر نوٹ لکھیں۔
- IV. حج کا فلسفہ کیا ہے۔ نیز اس کے انفرادی و اجتماعی فوائد بیان کریں۔
- V. ترجمہ و تشریح کیجئے۔

الف) اِنَّ اللہَ یَاْمُرُ بِالْعَدْلِ وَ الْاِحْسَانِ

ب) کَاٰیۃً مِّنَ اللّٰهِ مَنۡ لَّا یَرۡحَمِ اللّٰهُ

نمبر: 15

Serial No. Of the Answer Book
Roll No. (in figure)

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CHEMISTRY - I

Total Time: 3 Hours

Max: Marks: 85

Note: There are THREE Section of this Paper i.e. A, B and C, attempt each according to the given instructions.

Time: 20 Minutes

SECTION-A

Marks: 18

Note: Attempt all parts of section - A Section - A must be return to the superintendent after 20 minutes even if you have not attempted any question. Overwriting/ defacing/Cutting etc is prohibited in Section-A and no credit will be given to such answer.

I. Write the correct option i.e. A/B/C/D in the empty boxes.

- i. Sublimation is a technique used for
(A) Purification (B) Preparation (C) Evaporation (D) Standardization ☐
- ii. Charge of an electron is
(A) 4.8×10^{-10} (B) 1.76×10^{11} coulombs kg ☐
(C) 1.6×10^{-19} coulombs (D) 9.1×10^{-27} coulombs.
- iii. Dative bond is also known as
(A) Ionic (B) covalent (C) co-ordinate covalent. (D) Hydrogen bond ☐
- iv. An acid with high P_{ka} value will be
(A) Weak (B) Strong (C) Very strong (D) None of these ☐
- v. C_6H_6 is benzene.
(A) Molecular formula (B) Empirical formula (C) Both A & B (D) None of them ☐
- vi. The sum of P_H and P_{OH} is equal to
(A) 1×10^{-14} (B) 1×10^{-7} (C) 7 (D) 14 ☐
- vii. Which one has Zero dipole moment?
(A) H_2O (B) HCl (C) NH_3 (D) CO_2 ☐
- viii. Bond order of helium is ____
(A) Three (B) zero (C) Two (D) Four ☐
- ix. Total energy of universe is ____
(A) variable (B) Constant (C) Zero (D) 1000 cal ☐
- x. water is ____
(A) metal (B) Mixture (C) Element (D) Amphoteric ☐
- xi. Electron gas theory explains.
(A) Ionic solid (B) covalent solids (C) molecular solids (D) metallic solids ☐
- xii. Smallest possible unit of matter is called.
(A) Molecule (B) Atom (C) Electron (D) Proton ☐
- xiii. Which one is more electronegative.
(A) Nitrogen (B) Oxygen (C) Chlorine (D) Bromine ☐
- xiv. Plasma exist in ____
(A) Earth (B) Moon (C) Sea water (D) Sun ☐
- xv. Diamond is an allotropic form of.
(A) Silicon (B) sodium (C) Nickel (D) carbon ☐
- xvi. R_f stands for
(A) Ratio of flow (B) Retardation flow (C) Ratio front (D) Flow of reactants ☐
- xvii. Hybridization in methane is ____
(A) sp^3 (B) sp^2 (C) sp (D) dsp ☐
- xviii. Speed of ordinary light is 3×10^{10} cm per ____
(A) Day (B) Minute (C) Second (D) Hour ☐

CHEMISTRY -I

Note: time allowed for section B and C is 2 hours and 40 minutes

SECTION "B"

Marks: 40

II. Attempt any TEN Parts out of the following. Each Part carries equal marks

- i. Define the term "Rate constant" of reaction.
- ii. Balance the following equations by ion electron method.

$$\text{Sn}^{2+} + \text{I}_2 \rightarrow \text{Sn}^{4+} + \text{I}^-$$

$$\text{MnO}_4^- + \text{C}_2\text{O}_4^{2-} \rightarrow \text{Mn}^{2+} + \text{CO}_2$$
- iii. What do you understand by an ideal solution.
- iv. How do you purify a liquid organic compound?
- v. Write any four basic assumption of the kinetic theory of gasses.
- vi. Explain the term. The shape of the water molecule?
- vii. Explain why you feel cold under a fan on a hot- summer day.
- viii. Define and explain enthalpy.
- ix. What is electrolysis?
- x. Difference b/w an orbit and an orbital?
- xi. Explain the Hess law with diagram.
- xii. How the sodium chloride can be purified.
- xiii. Explain the principal quantum number.

SECTION "C"

Marks: 27

Note: Attempt any THREE questions of the following. Each question carries equal Marks.

- III. a) Discuss the properties of liquid on the basis of kinetic molecular theory.
 b) Calculate the wave length associated with an object of mass 1.0 kg moving with velocity of 1.0m/s. $h = 6.6262 \times 10^{-34} \text{ Jxs}$
- IV. a) what are quantum numbers discus the significance of each quantum number .
 b) what do you understand by the term "space lattice" and unit cell"
- V: a) What do you understand by half life period of a reaction?
 b) Notes on the following .
 i: Filtration ii) paper chromatography.
- VI: a) what are the characteristics of catalysts?
 b) How canal rays are produced

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BIOLOGY-I

Total Time: 3 Hours

Max: Marks: 85

Note: There are THREE Section of this Paper i.e. A, B and C, attempt each according to the given instructions.

Time: 20 Minutes

SECTION-A

Marks: 18

Note: Attempt all parts of section – A/Section –A must be return to the superintendent after 20 minutes even if you have not attempted any question. Overwriting/ defacing/Cutting etc is prohibited in Section-A and no credit will be given to such answer.

I. Write the correct option i.e. A/B/C/D in the empty boxes.

- i. Earth worm belongs to phylum.
(A) Arthropoda (B) Annelida (C) Porifera (D) Nematoda ☐
- ii. Which one of the following is not a blue green algae.
(A) Clostridium (B) Anabaena (C) Nostoc (D) Oscillatoria ☐
- iii. How many fatty acids residues are normally present in phospholipids.
(A) 1 (B) 2 (C) 3 (D) 4 ☐
- iv. Finger like projections found in small intestine of man are called.
(A) Colon (B) villi (C) Rectum (D) caecum ☐
- v. All are membrane bounded organelles except.
(A) Mitochondria (B) Chloroplast (C) Golgi apparatus (D) Ribosomes ☐
- vi. The edible fungus is .
(A) Morchella (B) Rhizopus (C) Ustilago (D) Puccinia ☐
- vii. Malaria is caused by.
(A) Bacteria (B) Fungi (C) virus (D) Sporozoan ☐
- viii. Electron transport chain occurs in :
(A) Cytoplasm (B) Mitochondria (C) Endoplasmic Reticulum (D) None of them ☐
- ix. In human heart the opening between left auricle and left ventricle is guarded by a valve called.
(A) semilunar valve (B) Bicuspid valve (C) Tricuspid valve (D) None of them ☐
- x. The method of asexual reproduction in which the trichome breaks at the point of heterocyst is called
(A) Akinetes (B) Hormogonia (C) Spore formation (D) Zygosporangium ☐
- xi. Phytophthora infestans causes late blight in
(A) Potato (B) Calocacia (C) Tomato (D) Tobacco ☐
- xii. Which one is not in the life cycle of plasmodium.
(A) Gametocyte (B) Merozoite (C) Ookinete (D) Sporophyte ☐
- xiii. The reproduction involving the union of sperm and egg in green plants is called.
(A) Homogamy (B) Gametogenesis (C) Heterogamy (D) Heterospory ☐
- xiv. The cereal crops belong to the family.
(A) Fabacea (B) Poaceae (C) Rosaceae (D) Solanaceae ☐
- xv. $\text{P}_2, \text{K}_{(5)}, \text{C}_{(5)} \text{A}_5, \text{G}_{(2)}$ is the floral formula of.
(A) Cassia fistula (B) Lathyrus oderatus (C) Petunia alba (D) Rosa indica ☐
- xvi. The female reproductive organ in bryophytes is.
(A) Archegonium (B) Antheridium (C) Carpel (D) None of them ☐
- xvii. Kangaroo belongs to a sub class of mammalia called.
(A) Eutheria (B) Metatheria (C) Prototheria (D) Primates ☐
- xviii. Which colours of visible spectrum is mostly absorbed by chlorophyll molecules during Photosynthesis?
(A) Blue and red (B) Green and yellow (C) Indigo and orange (D) Violet and green ☐

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BIOLOGY PART-I

Note: Time Allowed 2:40Hrs

SECTION -B

Marks: 40

II. Attempt any TEN parts of the following . All part carry equal marks.

- i) Draw a label diagram of a typical animal cell.
- ii) What are conjugated molecules give examples.
- iii) Write the control measures against AIDS.
- iv) Briefly describe the slime molds.
- v) What do you know about mycorrhiza?
- vi) How microphyllous leaf evolved.
- vii) Define vaccine and give its types.
- viii) Discuss the type of vegetative reproduction in yeast.
- ix) Explain the role of CO_2 in Photosynthesis.
- x) What are microphagous feeders . Give some examples .
- xi) Discuss asthma .
- xii) differentiate between microphyllous and megaphyllous leaf.

SECTION. C

Marks.27

Note: Attempt any THREE of the following . All questions carry equal marks. Draw neat and Labeled diagrams where necessary.

- III: Define immunity and describe the various types of immunity.
- IV: What is genetic recombination? Describe transduction and conjugation.
- V: What are lipids? Classify lipids and give its functions.
- VI: What is phosphorylation? Describe Ps-I and P-II and the transfer of electrons from Water to NADP^+ .