

AJKBISE Mirpur H.S.S.C. Part-I (11th) Class Model Papers

INDEX

Sr. No.	Subject	Page
1.	English	3
2.	Urdu	7
3.	Islamic Studies	11
4.	Physics	15
5.	Chemistry	23
6.	Biology	27
7.	Mathematics	31
8.	Statistics	35
9.	Computer Science	39
10.	Economics	43
11.	Economics (Urdu Version)	47

Note:- The Model Papers of the aforementioned subjects are being circulated for the guidance of students and teachers. The Intermediate Part-I (Class XI) Examination 2011 and onward will be conducted according to these Model Papers. The questions given in these Papers do not have any importance but to provide guidance only. The paper setter is authorized to ask any question from the syllabus according to the Model Papers. However, original question papers may have the close resemblance with the Model Papers. The Learning Achievements of the candidates will be Judged on the basis of his knowledge, Comprehension, Application and Analysis skills.

MODEL PAPER 'ENGLISH'

Intermediate Part-I Examination

OBJECTIVE

Time: 30 Minutes

Marks: 20

Note: Write answers to the questions on the objective answer sheet provided. You have four choices for each objective type question as A, B, C, and D. The choice which you think is correct; fill the circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling to or more circles will result in zero mark in that question. Attempt as many question as given in objective-type question paper and leave others blank.

Q.No.1. Encircle correct answer like A,B,C or D to the following questions: 10

- (i) "Oh, yes". Norma repressed a smile. She was sure now it was a sales-pitch.
(a) Persuasive talk (b) do business (c) cunning (d) allurement
- (ii) I had never seen anything extraordinary upon this high point of rugged land.
(a) fertile (b) rough (c) even (d) smooth
- (iii) The children with their yellow hair hollered at the deep dome of martian sky.
(a) yelled (b) cried (c) looked (d) pointed to
- (iv) I had a yexing dream one night.
(a) nightmare (b) happy (c) disturbing (d) joyful
- (v) He had been, perhaps, too deeply engrossed in himself.
(a) absorbed (b) busy (c) interested (d) annoyed
- (vi) The first Man reads a discarded newspaper.
(a) decorated (b) interesting (c) old (d) rejected
- (vii) Ellen fidgets as she listens the broadcast of her father.
(a) feels restless (b) slumbers (c) enjoys (d) sits down
- (viii) Miss Mc Cutcheon wanted to quit and go back home.
(a) earn money (b) give up (c) teach (d) be quiet
- (ix) We have no time to stand and stare.
(a) sense (b) wait (c) gaze (d) see
- (x) I met a traveller from an antique land.
(a) unique (b) ancient (c) remote (d) alien

Encircle correct answer like A,B,C or D to the following questions: 5

- (xi) How were the people of Hurbert's village destroyed?
(a) by war (b) by illness (c) by flood (d) by plague
- (xii) What was the trial shot of the doctor about the sick girl?
(a) flu (b) fever (c) diphtheria (d) sore throat
- (xiii) Which one is a desert state sweltering with the heat of injustice and oppression?
(a) Georgia (b) Mississippi (c) Alabama (d) Virginia
- (xiv) What is the age of the girl in "The Heat Lighting"?
(a) 20 (b) 21 (c) 22 (d) 23

MODEL PAPER “ENGLISH”

Intermediate Part-I Examination

SUBJECTIVE

Time: 2:30Hours

Marks: 80

SECTION -I

Note: Out of Questions No.2 opt any 6 questions, Out of question No.3 opt any 5 questions and out of question No.4 opt any 4 questions. While writing answer, write question No. carefully.

Q.No.2. Write short answers.

12

- (i) Why did Norma want to get \$ 50,000?
- (ii) Why did Jess not want to go with his old father?
- (iii) What was the condition of the Bittering family on hearing the news of war on the earth?
- (iv) Why did Mrs. Jones ask the boy to wash his face and comb his hair?
- (v) Why did Manana accuse Hubert of picking the lost pocket book?
- (vi) What was Gorgious's ambition?
- (vii) What is the dream of Martin Luther King?
- (viii) Why did Della sell her hair?
- (ix) What things were found in the various pockets of the overcoat?

Q.No.3. Write short answers.

10

- (i) What is the condition of the girl when she enters the bus station?
- (ii) How does the girl come to know that the first man is the killer?
- (iii) Who is Kreton?
- (iv) How does Kreton impress General Powers?
- (v) What is the purpose of Kreton's journey to the earth?
- (vi) Why does Clay need money?
- (vii) What does Miss Mc Cuteheon think about children of the town?
- (viii) Why does Clark Larrabee return home?

Q.No.4. Write short answers.

8

- (i) What does the Night Mail bring?
- (ii) What did the reader tell the rider about the valley?
- (iii) Why does the poet feel impressed by the Sindhi Woman?
- (iv) Who was Ozymandias?
- (v) What is the moral lesson of the poem "A Tale of Two Cities"?
- (vi) How do the attributes of God exercise their influence on man's character?

SECTION -II

Q.No.5. Write a letter to your cousin suggesting him/her some books to improve his/her English.

10

OR

Write an application to the Principal of your college requesting him/her to allow you to change your subject (s).

Q.No.6. Write a story bearing the moral: A Stitch in Time Saves Nine.

10

OR

Necessity is the Mother of Invention.

Q.No.7. (a) Explain the following lines with reference to the context.

5

They take it, break it open, let
A gold or silver fountain wet.
Mouth, fingers, cheek, nose, chin:
Radiant as lanterns, they forget
The dark street I am standing in.

(b) Punctuate the following extract from Book-I

5

and jess he almost whispered the doctors told me to sit still and to take life easy I
could not do it I had to work I had to go back

(c) Use any Five of the following pair of words in your own sentences:

5

- | | | |
|---------------------|--------------------|----------------------|
| (i) Accede; Concede | (ii) Barren; Baron | (iii) Device; Devise |
| (iv) Human; Humane | (v) Tail; Tale | (vi) Vain; Vein |
| (vii) Vale; Veil | | |

Q.No.8. Translate the following passage into Urdu (Short Stories Book-I).

15

When the couple had walked some hundred yards ahead of him, he hurriedly started after them. Hardly had he reached half way across the road when a truck full of bricks came from behind like a gust of wind and crushing him down speeded off towards McLeod Road. The driver of the truck had heard a shriek and had actually for a moment slowed down, but realizing that something serious had happened, had taken advantage of the darkness and had sped away into the night. Two or three passers-by who had witnessed the accident shouted: "Stop him" take the number," but the truck was no more to be seen.

OR

Candidates whose medium of Examination is English will write an essay on "Examinations".

15

حصہ معروضی

کل نمبر: 20

الفاظ میں

تمام سوالات کے جوابات اسی کاپی پر ہر سوال کے سامنے دی گئی ہدایات کے مطابق حل کریں۔
کاٹ کریا کسی بھی طریقے سے مٹا کر یا ایڈیشنل سے لکھے ہوئے جوابات غلط تصور ہوں گے۔

سوال نمبر ۱۔ مختصر جواب تحریر کیجئے

(ii) دنیا کی محرز قوموں نے کس خوبی کی وجہ سے عزت پائی؟

(iv) ٹیکے کے باپ کی بیوی کیوں جاتی رہی؟

سوال نمبر 2- (الف) تشبیہ کی تعریف کیجئے اور دو مثالوں سے وضاحت کیجئے۔

(ب) مقطع کی تعریف کیجئے اور دو مثالوں سے وضاحت کیجئے۔

5=1x5

(ج) تذکیر دتا میہ کو مد نظر رکھتے ہوئے درج ذیل جملوں کو درست کیجئے۔

- (i) وزیر تعلیم نے پرسوں صنف اٹھائی۔
.....
- (ii) میری قلم خوبصورت ہے۔
.....
- (iii) لڑکوں نے کمرہ امتحان میں اودھم مچا رکھا ہے۔
.....
- (iv) سڑکوں پر تارکول بھائی جا رہی ہے۔
.....
- (v) یہ میرے بھائی کی فوٹو ہے۔
.....

نوٹ:۔ قواعد میں استعارہ، تلمیح، مطلق، قافیہ، ردیف سے متعلق بھی سوالات پوچھے جاسکتے ہیں۔

ماڈل پیپر "اردو"

برائے انٹرمیڈیٹ امتحان پارٹ-1

حصہ انشائی

کل نمبر: 80

وقت: 2:40 گھنٹے

حصہ اول

10=1+1+8

سوال نمبر 3۔ درج ذیل اشعار کی تشریح کیجئے۔ نظم کا عنوان اور شاعر کا نام بھی تحریر کیجئے۔

(الف) جینے کا اندوہ نہ مرنے کا ذرا غم

کیساں ہے انھیں زندگی اور موت کا عالم

واقعہ نہ برس سے، نہ مہینے سے وہ اک دم

نہ شب کی مصیبت، نہ بھی روز کا ماتم

دن رات، گھڑی پہرہ و سال میں خوش ہیں

پورے ہیں وہی مرد جو ہر حال میں خوش ہیں

10=1+9

(ب) درج ذیل اشعار کی تشریح کیجئے اور شاعر کا نام بھی تحریر کیجئے۔

آفاق کی منزل سے گیا، کون سلامت

اسباب لٹا راہ میں، یاں ہر سفری کا

ہر رخ ہم گھر، راہ و محشر سے ہمارا

انصاف طلب ہے، تری بیدارگری کا

لے سانس بھی آہستہ، کہتا دک ہے بہت کام

آفاق کی اس کارگر شیشہ گری کا

حصہ دوم

سوال نمبر 4۔ سیاق و سباق کے حوالے سے کسی ایک جزو کی تشریح کیجئے۔ مصنف کا نام اور سبق کا عنوان بھی تحریر کیجئے۔ 15=10+3+1+1

(الف) عزم و استقلال، شجاعت، صبر و تحمل، رضا، تقدیر، مصیبتوں کی برداشت، قربانی، قناعت، استقلال، ایثار، جود، تواضع، خاکساری،

مسکنت، نشیب و فراز، بلند و پست، تمام اخلاقی پہلوؤں کے لئے جو مختلف انسانوں کو مختلف حالات میں یا ہر انسان کو مختلف صورتوں

میں پیش آتے ہیں۔ ہمیں عملی ہدایت اور مثال کی ضرورت ہے جو صرف پیغمبر اسلام ﷺ کی سوانح میں مل سکتی ہیں۔

(ب) محنت اور جفاکشی کی قابلیت بھی سرسید کے خاص اوصاف میں سے تھی، قطع نظر اس کے کہ ابتداء سے ان کو کام کرنے کی عادت رہی۔

ان کے قویٰ میں فطرتاً مشکلات کے برداشت کرنے اور کسی کام سے ہمت نہ ہارنے کی لیاقت اور استعداد رکھی تھی اور عطا ہوا ان

کی غیر معمولی ذہانت بھی ان کے دائمی غور و فکر اور دائمی محنت کا نتیجہ تھی۔

10=1+9	سوال نمبر 5۔ مندرجہ ذیل میں سے کسی ایک نصابی سبق کا خلاصہ لکھیے اور مصنف کا نام بھی تحریر کیجئے۔
5	(i) ادیب کی عزت (ii) سٹارٹ
10	سوال نمبر 6۔ علامہ اقبال کی نظم "پیغام" کا خلاصہ تحریر کیجئے۔
10	سوال نمبر 7۔ امتحانی نظام کے موضوع پر دو دوستوں کے درمیان مکالمہ تحریر کیجئے۔
10	کالج کے جلسہ تقسیم انعامات کی روداد لکھیے۔ (روزانہ پچھ سے متعلق بھی سوال پوچھا جاسکتا ہے)
10	سوال نمبر 8۔ کریکٹر شولکلیٹ کے حصول کے لئے پرنسپل صاحب کے نام درخواست لکھیے۔ (رہید سے متعلق بھی سوال پوچھا جاسکتا ہے)
10=2+8	سوال نمبر 9۔ درج ذیل عبارت کی تلخیص کیجئے اور مناسب عنوان تحریر کیجئے۔ ہم دیکھتے ہیں کہ دنیا میں دو قسم کی قومیں ہیں۔ ان میں سے ایک نے اپنے باپ دادا کو درجہ کمال تک پہنچا ہوا اور تاقابل سہو خط سمجھ کر ان کے علوم و فنون کو ان کے طریقہ معاشرت کو کامل سمجھا اور اسی کی پیروی پر جمی رہی۔ خود بہتری، ترقی اور نئی چیزوں کے اخذ و ایجاد پر کچھ کوشش نہیں کی۔ دوسری قوم نے کسی کو کامل نہیں سمجھا اور ہمیشہ ترقی، نئے علوم و فنون اور طریقہ معاشرت کے ایجاد میں کوشش کرتی رہی۔ اب دیکھ لو ان دونوں قوموں میں کیا فرق ہے اور کون ترقی اور کون تنزل کی حالت میں ہے۔

ماڈل پیپر "اسلامیات" (لازمی)

برائے انٹرمیڈیٹ امتحان پارٹ-1

حصہ معروضی

وقت: 15 منٹ

کل نمبر: 10

سوال نمبر 1۔ تمام سوالات کے جوابات دی گئی جوابی کاپی پر لکھیے۔ ہر سوال کے 4 (چار) ممکنہ جواب A، B، C اور D دیئے گئے ہیں جس جواب کو آپ درست سمجھیں جوابی کاپی پر اس سوال نمبر کے سامنے A، B، C یا D کے سامنے دیئے گئے دائروں میں سے ایک دائرے کو پین یا مارکر کی سیاہی سے بھر دیں۔

- | | | | | | |
|--------|-----------------------------|------------------------|------------------------|------------------------|--------------------------|
| (i) | عقیدہ کے معنی ہیں۔ | (الف) عقیدت مندی | (ب) شادی ہونا | (ج) گرہ لگائی ہوئی چیز | (د) مشکل کشائی |
| (ii) | "الہیۃ" جمع ہے۔ | (الف) الہ کی | (ب) لہو کی | (ج) الہ کی | (د) لہو کی |
| (iii) | محفوظ کتاب ہے۔ | (الف) بخاری شریف | (ب) زیور | (ج) کتاب الاثار | (د) قرآن مجید |
| (iv) | ارکان اسلام میں سے ہے۔ | (الف) ملائکہ پر ایمان۔ | (ب) آخرت پر یقین | (ج) روزہ | (د) الہامی کتاب پر ایمان |
| (v) | جہاد کے لغوی معنی ہیں۔ | (الف) روزی کمانا | (ب) جدید علم حاصل کرنا | (ج) کوشش کرنا | (د) دنیا سے بے رغبتی |
| (vi) | "املاق" کے معنی ہیں۔ | (الف) مالک ہونا | (ب) بادشاہ | (ج) مطلق | (د) کنہ پروری |
| (vii) | "اسوۃ" کے معنی ہیں۔ | (الف) سردار ہونا | (ب) شہر کی فصیل | (ج) نمونہ | (د) طاقتور |
| (viii) | کلمہ مبرک کے لغوی معنی ہیں۔ | (الف) آگے بڑھنا | (ب) پیچھے ہٹنا | (ج) برداشت کرنا | (د) کوشش کرنا |
| (ix) | جامع قرآن لقب ہے۔ | (الف) حضرت علی | (ب) حضرت ابو بکر صدیق | (ج) حضرت عثمان | (د) حضرت زید بن ثابت |
| (x) | "وُزِدَ" کے معنی ہیں۔ | (الف) وزیر بنانا | (ب) زیارت کرنا | (ج) بوجھ | (د) تکلیف |

ماڈل پیپر "اسلامیات" (لازمی)

برائے انٹرمیڈیٹ امتحان پارٹ-1

حصہ انشائی

82 = 5x8

کل نمبر: 40

وقت: 1:45 گھنٹے

نوٹ۔ سوال نمبر 2، 3 اور 4 میں سے کوئی سے 12 (بارہ) مختصر سوالات کے جوابات تحریر کریں جو اب تحریر کرتے وقت سوال کا نمبر ضرور تحریر کریں۔

حصہ اول

12x2=24

سوال نمبر 2- مختصر سوالات کے جوابات تحریر کریں۔

- اسلام کے بنیادی عقائد تحریر کیجئے۔
- شرک کی اقسام تحریر کیجئے۔
- ملائکہ میں سے چار اہم کے نام تحریر کیجئے۔
- دو الہامی کتابوں کے نام تحریر کیجئے۔
- توحید باری تعالیٰ سے متعلق کسی آیت قرآنی کا ترجمہ تحریر کیجئے۔
- قرآن حکیم کی چار اہم خصوصیات تحریر کیجئے۔

سوال نمبر 3- مختصر سوالات کے جوابات تحریر کریں۔

- اراکین اسلام تحریر کیجئے۔
- سونے اور چاندی کا نصاب تحریر کیجئے۔
- جہاد کی اقسام تحریر کیجئے۔
- غیبت کن دھورتوں میں جائز ہے؟
- دین کے ستون نماز کے کوئی دو عقائد تحریر کیجئے۔
- جنگ اور جہاد میں فرق تحریر کیجئے۔

سوال نمبر 4- مختصر سوالات کے جوابات تحریر کریں۔

- مساوات کے متعلق حضور اکرم ﷺ نے جتنا اوداع میں کیا فرمایا؟
- ذکر الہی کی کوئی دو اقسام تحریر کیجئے۔
- امت پر شفقت و رحمت کے متعلق رسول کریم ﷺ کی حدیث مبارکہ کا ترجمہ تحریر کیجئے۔
- سحاح ستہ کسے کہتے ہیں؟
- لَقَدْ كَانَ لَكُمْ فِي رَسُولِ اللَّهِ أُسْوَةٌ حَسَنَةٌ آیت مبارکہ کا ترجمہ تحریر کیجئے۔
- لَا يَرْحَمُهُ اللَّهُ مَنْ لَا يَرْحَمُ النَّاسَ حدیث مبارکہ کا ترجمہ تحریر کیجئے۔

حصہ دوم

$$8 \times 2 = 16$$

8

8

8

نوٹ: مندرجہ ذیل سوالات میں سے صرف دو کے جوابات تحریر کریں۔

سوال نمبر 5۔ عقیدہ ختم نبوت کا مفہوم مفصل تحریر کریں۔

سوال نمبر 6۔ جہاد اسلامی سے کیا مراد ہے؟ اس کی اقسام اور فضائل بیان کیجئے۔

سوال نمبر 7۔ حجۃ الوداع کی تفصیل بیان کیجئے۔

MODEL PAPER "PHYSICS"

Intermediate Part-I Examination

OBJECTIVE

Time: 20 Minutes

Marks: 17

Q.No.1. Note: Write answers to the questions on the objective answer sheet provided. You have four choices for each objective type question as A, B, C, and D. The choice which you think is correct; fill the circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling to or more circles will result in zero mark in that question. Attempt as many question as given in objective-type question paper and leave others blank.

- (i) The dimensions of Moment of inertia are
(a) ML^{-2} (b) ML^2 (c) M^2L (d) ML
- (ii) The resultant of two forces 10 N and 8 N cannot be:
(a) 2N (b) 18N (c) 12N (d) 20N
- (iii) $i \cdot (j \times k)$
(a) i (b) j (c) k (d) l
- (iv) The velocity – time graph is parallel to Time – axis, the acceleration of the moving body is
(a) Positive (b) Negative (c) Zero (d) Maximum
- (v) A body of weight 5 N falls through a height of 10m. Its energy 5m above the ground is:
(a) 25J (b) 50J (c) Both 'a' and 'b' (d) 75J
- (vi) The weight of man in a elevator moving down with an acceleration 9.8 ms^{-2} will become:
(a) Half (b) Double (c) Unchanged (d) Zero
- (vii) The moment of linear momentum is called:
(a) Impulse (b) Torque (c) Angular Momentum (d) Couple
- (viii) High concentration of red blood cells increases the viscosity of blood from
(a) 2 – 3 times that of water (b) 3 – 4 times that of water (c) 3 – 5 times that of water (d) 4 – 5 times that of water
- (ix) The product of time-period and frequency is equal to:
(a) 3 (b) 2 (c) 1 (d) 0
- (x) The velocity of sound in Hydrogen as compared to Oxygen under similar condition is:
(a) $\frac{1}{4}$ the velocity of O_2 (b) Four times the velocity in O_2 (c) $\frac{1}{2}$ the velocity in O_2 (d) Two times the velocity in O_2
- (xi) When two notes of frequencies f_1 and f_2 are formed. If $f_1 > f_2$, then frequency of beats is:
(a) $f_1 + f_2$ (b) $f_1 - f_2$ (c) $\frac{1}{2} (f_1 + f_2)$ (d) $\frac{1}{2} (f_1 - f_2)$
- (xii) Light from sun reaches the earth in the form of:
(a) Cylindrical wave front (b) Spherical wave front (c) Plane wave fronts (d) All the above

- (xiii) The central part of Newton's Rings when observed with reflected light is dark due to the reason that;
- (a) The part of ray reflected from upper surface of convex lens undergoes a phase shift of 180° (b) The reflection from upper surface of air film undergoes a phase shift of 180° (c) The reflection from lower surface of air film undergoes a phase shift of 180° (d) All of above
- (xiv) A double convex lens acts as a diverging lens when the object is:
- (a) Inside the focus (b) Away from $2f$ (c) Between f and $2f$ (d) On $2f$
- (xv) Least distance of distinct vision:
- (a) Increase with increase of age (b) Remain same with increase of age (c) decrease with increase of age (d) All of these
- (xvi) Pressure of an ideal gas in terms and conditions of its density can be written as:
- (a) $P = \rho v^2$ (b) $P = \frac{1}{3} \rho v^2$ (c) $P = \frac{2}{3} \rho v^2$ (d) $P = \frac{1}{2} \rho v^2$
- (xvii) Which of the following forces is irreversible:
- (a) Slow compression of an elastic spring (b) Slow evaporation of a substance on an insulated vessel (c) Slow compression of a gas (d) A chemical explosion

MODEL PAPER "PHYSICS"

Intermediate Part-I Examination

SUBJECTIVE

SECTION - I

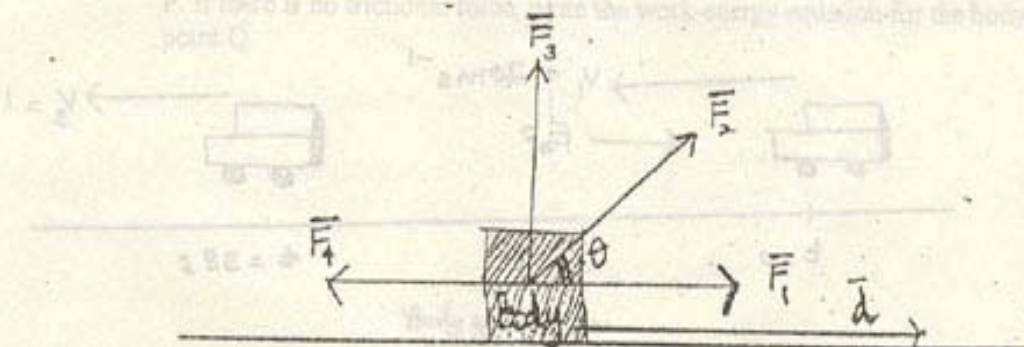
Time: 2:40 hours

Marks: 68

Note: Out of Questions Nos. 2, 3, and 4 write any 22 (Twenty two) short answers. While writing answer write question No. carefully.

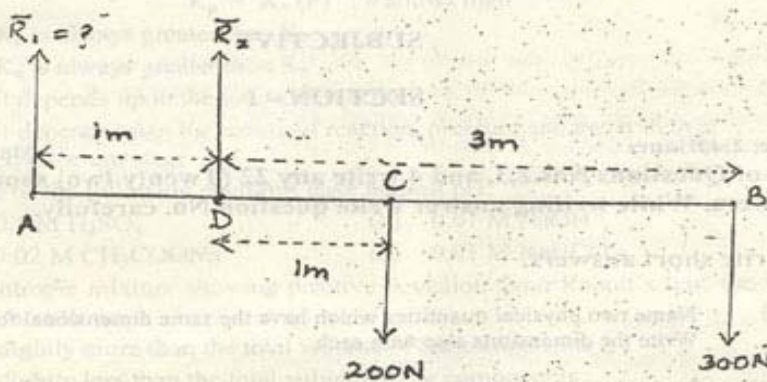
Q.No.2. Write short answers.

- Name two physical quantities which have the same dimensional formula. Write the dimensions also with each
- Find the dimensions of ' η ' in the relation $F = 6\pi\eta rv$ where r = radius and v = velocity
- Write the names of two supplementary units and define them
- Forces \vec{F}_1 , \vec{F}_2 , \vec{F}_3 and \vec{F}_4 are equal in magnitude but have different directions as shown in the given figure. Which force will give maximum work and why?

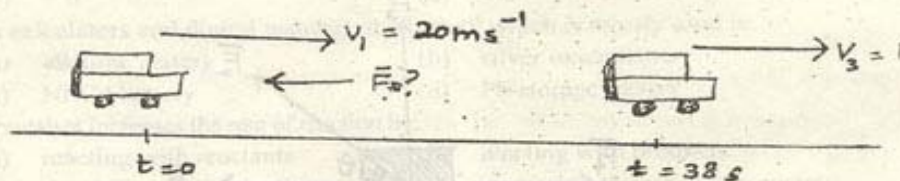


- Given that $\vec{A} = \hat{i} - 2\hat{j} + 3\hat{k}$ and $\vec{B} = 3\hat{i} - 4\hat{k}$, find the length of the projection of \vec{A} on \vec{B}

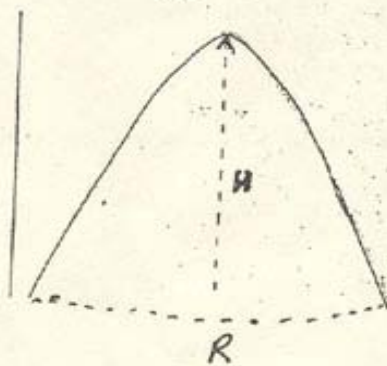
- vi) Find the value of unknown forces \vec{R}_1 in the figure (Rod AB with pivotal point D) using 2nd condition of equilibrium.



- vii) In the figure the velocity of the car is reduced due to the retarding force \vec{F} . Find the magnitude of the force.

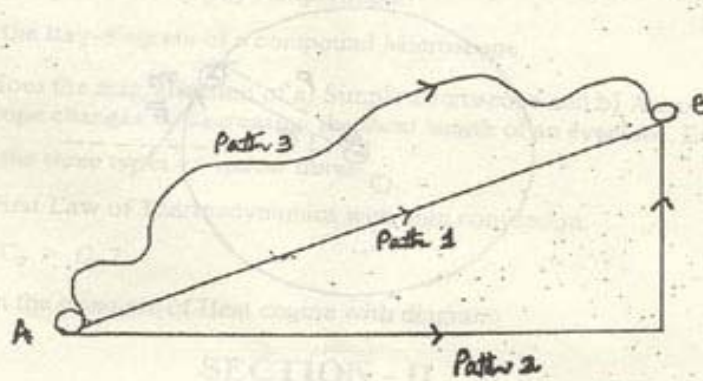


- (viii) In the figure, maximum height and horizontal range are equal, find the angle of projection of the projectile.

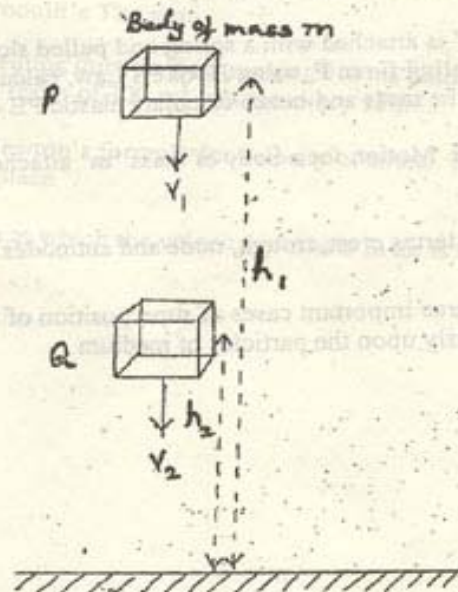


(ix) Prove that power is a scalar product of force and velocity.

(x) In figure there are three paths between points A and B. On which path the work done in moving a body from A to B will be maximum or will it remain the same.

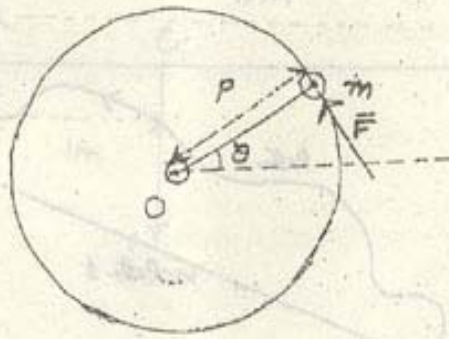


(xi) A body of mass m is falling down with velocity v_1 and at height h_1 from point P. If there is no frictional force, write the work-energy equation for the body at point Q.



Q.No.3. Write short answers.

- i) Figure shows a mass m attached to a mass-less rod at O (pivot point). A force is applied on it as shown. Find the value of TORQUE in terms of moment of inertia I and angular acceleration ' α '.



- ii) A 1000 kg car is traveling with a speed of 144 kmh⁻¹ round a curve of 100 m. Find the necessary centripetal force.
- iii) Describe what should be the minimum velocity for a satellite, to orbit close to the earth around it.
- iv) State the Torricellis' Theorem with diagram
- v) Explain the difference between laminar flow and turbulent flow.
- vi) Two row boats moving parallel in the same direction are pulled towards each other. Explain.
- vii) Define Resonance with one example
- viii) A mass ' m ' is attached with a spring and pulled slowly through x_0 against the elastic restoring force F , using Hooke's Law, calculate the work done in displacing the mass and hence calculate elastic PE of the spring.
- ix) Explain S.H. Motion for a body of mass ' m ' attached with a spring of spring constant k .
- x) Explain the terms crest, trough, node and antinodes.
- xi) Name the three important cases of superposition of two waves when they act simultaneously upon the particles of medium.

Q.No.4. Write short answers.

- i) What is Huygen's Principle?
- ii) What is Total Internal Reflection?
- iii) Draw the diagram of Michelson's Interferometer and write the equation by which we can find the displacement L of the mirror.
- iv) Define Grating Element.
- v) How is the distance between interference fringes affected by the separation between the slits of Young's Experiment?
- vi) Draw the Ray-diagram of a compound Microscope.
- vii) How does the magnification of a) Simple microscope and b) Astronomical Telescope changes by decreasing the focal length of an eyepiece. Explain.
- viii) Name the three types of optical fibres.
- ix) State First Law of Thermodynamics with sign convention.
- x) Why $C_p > C_v$?
- xi) Explain the principle of Heat engine with diagram.

SECTION - II

Note: - Attempt any **THREE** questions.

(8 x 3) = 24

Q.No5. (a) Define Vector Product of Two Vectors with examples. State right hand rule. 4
Show that $\vec{A} \times \vec{B} = -\vec{B} \times \vec{A}$

(b) Find the angle between vectors, $\vec{A} = 5\hat{i} + \hat{j}$ and $\vec{B} = 2\hat{i} + 4\hat{j}$ 4

Q.No6.(a) Derive an expression for Centripetal Force. 4

b) What is the least speed at which an aeroplane can execute a vertical loop of 1.0 km radius so that there will be no tendency for the pilot to fall down at the height point.

Q.No7. (a) State and prove Bernoulli's Theorem. 4

(b) How large must a heating duct be if air moving 3.0 ms^{-1} along it can replenish the air in a room of 300 m^3 volume every 15 min.

Q.No8. (a) Give drawback of Newton's formula for velocity of sound. How was this was corrected by Laplace. 4

(b) Find the temperature at which the velocity of sound in air is two times its velocity at 10°C . 4

MODEL PAPER "CHEMISTRY"

Intermediate Part-I Examination

OBJECTIVE

Time: 20 Minutes

Marks: 17

Q.No.1 Note: Write answers to the questions on the objective answer sheet provided. You have four choices for each objective type question as A, B, C, and D. The choice which you think is correct; fill the circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling to or more circles will result in zero mark in that question. Attempt as many question as given in objective-type question paper and leave others blank.

- (i) Which of the following has least mass?
- (a) 1 mole of S (b) 7.0 g of Ag
(c) 2 g atom of nitrogen (d) 3×10^{23} atoms of C
- (ii) The rate at which the solute moves in paper chromatography depends upon:
- (a) the distribution coefficient (b) the distribution law
(c) the boiling point of the solvent (d) Low partial pressures
- (iii) The formula for density of a gas at a given temperature and pressure is:
- (a) $d = \frac{P}{RT}$ (b) $d = \frac{PM}{RT}$
(c) $d = nP/RT$ (d) $d = \frac{M}{V}$
- (iv) In order to maintain the boiling point of water at 110°C , the external pressure should be:
- (a) 550 torr (b) between 500 and 760 torr
(c) between 760 and 1500 torr (d) any pressure can be maintained
- (v) The Cl^\ominus ion present at the corner of the unit cell is NaCl crystal, contributes:
- (a) $1/8$ th (b) $1/4$ th
(c) $1/2$ th (d) 1
- (vi) Splitting of spectral lines when atoms are subjected to strong electric field is called:
- (a) Zeeman effect (b) Stark effect
(c) Photoelectric effect (d) Compton effect
- (vii) Quantum number values for 2p orbitals are:
- (a) $n = 2$ $l = 1$ (b) $n = 1$ $l = 2$
(c) $n = 1$ $l = 0$ (d) $n = 2$ $l = 0$
- (viii) The paramagnetic behaviour of O_2 molecules is best explained by:
- (a) V.B. Theory (b) M.O.T.
(c) four lone pairs on two oxygen atoms
(d) VSEPR theory
- (ix) The dipole moment of CHCl_3 is 1.05 D, while that of CCl_4 is zero Debye, because in CCl_4 :
- (a) bond lengths are unequal
(b) the structure is planar
(c) the structure is perfectly tetrahedral
(d) every bond is non-polar

- (x) During an exothermic or endothermic reaction, which one of the following formula is used to calculate the amount of heat evolved or absorbed?
- (a) $\Delta H = \Delta E + P\Delta V$ (b) $\Delta E = q + W$
 (c) $Q = m \times S \times \Delta T$ (d) $Q_p = \Delta H$
- (xi) K_p and K_n of a gaseous chemical reaction are related as,
 $K_p = K_n (P)^{\Delta n}$, it shows that:
- (a) K_p is always greater than K_n
 (b) K_n is always greater than K_p
 (c) It depends upon the nature of reaction
 (d) It depends upon the nature of reaction, pressure and the system at equilibrium stage
- (xii) Which of the following solutions have highest pH:
- (a) 0.1 M H_2SO_4 (b) 0.01 M NaOH
 (c) 0.02 M CH_3COONa (d) 0.01 M $NaHCO_3$
- (xiii) In azeotropic mixture showing positive deviation from Raoult's law, the volume of the mixture is:
- (a) slightly more than the total volume of the components
 (b) slightly less than the total volume of the components
 (c) equal to the total volume of the components
 (d) none of these
- (xiv) The cryoscopic constant of water is $1.86^\circ C$. The elevation of B.P. for a 0.1 m solution of a solute in water is:
- (a) $18.6^\circ C$ (b) $1.86^\circ C$
 (c) $0.186^\circ C$ (d) sufficient data not given
- (xv) The oxidation number of carbon in $C_{12}H_{22}O_{11}$ is :
- (a) 0 (b) -6
 (c) +6 (d) +2
- (xvi) In calculators and digital watches, the battery which is mostly used is:
- (a) alkaline battery (b) silver oxide battery
 (c) Ni-Cd battery (d) Pb-storage battery
- (xvii) A catalyst increases the rate of reaction by:
- (a) reacting with reactants (b) reacting with products
 (c) decreasing the activation energy (d) increasing the activation energy

MODEL PAPER "CHEMISTRY"

Intermediate Part-I Examination

SUBJECTIVE

SECTION-1

Time: 2:40 Minutes.

Marks: 68

Note: Out of Questions Nos.2,3, and 4 write any 22 (Twenty two) short answers. While writing answer write question No. carefully.

Q.No.2. Write short answers.

(22x2)=44

- (i) NaCl has 58.5 amu as formula mass and not the molecular mass. Justify it.
- (ii) What is the number of covalent bonds in 8 g of CH_4 ?
- (iii) 11 g of carbon is reacted with 32 g of oxygen to give CO_2 . Which is the limiting reactant?
$$\text{C} + \text{O}_2 \longrightarrow \text{CO}_2$$
- (iv) How does a Gooch crucible increase the rate of filtration?
- (v) How the decolourization of undesirable colours is carried out for freshly prepared crystalline substances?
- (vi) Calculate the density of CH_4 at S.T.P.
- (vii) How do you explain that -273°C is theoretical temperature and is not attainable?
- (viii) Calculate the S.I. unit of general gas constant R.
- (ix) Why the vapour pressure of water, ethyl alcohol and diethyl ether are different from each other at 0°C ?
- (x) Why the things can be easily cooked in a pressure cooker?
- (xi) Sodium is a good conductor of electricity but sodium chloride in solid state is not. Give reason?

Q.No.3. Write answers to the short questions.

- (i) Justify that the distance gaps between different orbits go on increasing from the lower to the higher orbits.
- (ii) Why the photographic plate is dark and a few bright lines are there in the line emission spectra of a substance?
- (iii) According to de-Broglie's idea, only microscopic particles have the waves. Comment upon it.
- (iv) Why the ionization energies decrease down the group although the nuclear charges increase?
- (v) Why second I.P. of an element is always greater than its first I.P?
- (vi) Why NH_3 and PH_3 give coordinate covalent bonds with H^\oplus ?
- (vii) How M.O.T. justifies that He atoms cannot make the He_2 ?
- (viii) How do we determine the ΔH in the laboratory for food, fuel etc.?
- (ix) Specific heat of a substance depends upon the nature of substance. Comment.
- (x) Those gaseous reactions which happen with the increase of volume go to the backward direction, when the volume is decreased. Why?
- (xi) By diluting the solution of CH_3COOH , the % age ionization changes, but the dissociation constant of the acid remains the same at a constant temperature. How?

Q.No.4. Write answers to the short questions.

- (i) The sum of mole fractions of all the components is always equal to unity for any solution. Justify it.
- (ii) Why the relative lowering of vapour pressure is independent of temperature?
- (iii) Why the NaCl and KNO₃ are used to lower the melting point of ice?
- (iv) Why a salt like CH₃COONa produced from a weak acid and a strong base gives a basic aqueous solution?
- (v) How is Al anodized in an electrolytic cell?
- (vi) How can we say that a voltaic cell is reversible cell?
- (vii) How does electrochemical series tell us the distinction between the oxidizing and reducing agents?
- (viii) What are the electrode reactions of dry cell?
- (ix) The reaction rate decreases every moment but the rate constant 'k' of the reaction is a constant quantity, under the given conditions. Justify it.
- (x) Define activation energy and activated complex.
- (xi) The reactions happen due to collisions among the molecules, but all the collisions are not fruitful. Justify it.

SECTION-II

Note: Attempt any THREE questions.

(8 × 3) = 24

- Q.5 (a) How the mass spectrometer is employed to do the analysis of isotopes of an element. Mention the roles of electric and magnetic fields. 5
- (b) A well-known ideal gas is enclosed in a container having volume 500 cm³ at S.T.P. Its mass comes out to be 0.72g. What is the molar mass of this gas? 3
- Q.6 (a) Define and give two examples of each of the properties of crystalline solids: 5
 - (i) Isomorphism. (ii) Polymorphism.
 - (iii) Transition temperature. (iv) Allotropy.
 - (v) Anisotropy.
- (b) What is Born-Haber cycle? How lattice energy of a crystal can be determined by it. 3
- Q.7 (a) Justify various spectral lines for hydrogen atom by using the formula of energy difference of Bohr's model of hydrogen atom. 4
- (b) Discuss the structure of ethene (CH₂ = CH₂) on the basis of sp²-hybridization of carbon atoms. 4
- Q.8 (a) Give three definitions of 'Raoult's law'. Derive the formula of this law when both the components are volatile and give its graphical explanation. 5
- (b) Calculate the pH of a buffer solution in which 0.11 molar CH₃COONa and 0.09 molar CH₃COOH solutions are present. pK_a for CH₃COOH is 4.78. 3
- Q.9 (a) Give the rules for the balancing of redox reaction by ion-electron method and balance the following equation by this method. 4
$$\text{MnO}_4^{-1}(\text{aq}) + \text{C}_2\text{O}_4^{2-}(\text{aq}) + \text{H}_2\text{O} \longrightarrow \text{MnO}_2(\text{s}) + \text{CO}_2(\text{g}) + \text{OH}^{-}(\text{aq})$$
- (b) How Arrhenius equation is employed to calculate the energy of activation of a reaction. 4

MODEL PAPER "BIOLOGY"

Intermediate Part-I Examination

OBJECTIVE

Time: 20 Minutes

Marks: 17

Q.No.1. Note: Write answers to the questions on the objective answer sheet provided.

You have four choices for each objective type question as A, B, C, and D. The choice which you think is correct; fill the circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling to or more circles will result in zero mark in that question. Attempt as many question as given in objective-type question paper and leave others blank.

- (i) A large regional community primarily determined by climate.
(a) Population (b) Biosphere (c) Ecosystem (d) Biome
- (ii) Substances which on hydrolysis yield polyhydroxy aldehyde or ketone sub-units.
(a) Acylglycerols (b) Polypeptides (c) Carbohydrate (d) Nucleic acids
- (iii) Tay-sachs disease results due to accumulation in brain cells:
(a) Mg^{++} ions (b) Glucose (c) Lipids (d) RNA
- (iv) The infectious proteins are:
(a) Viruses (b) Viroids (c) Virions (d) Prions
- (v) Bacteria require low concentration of oxygen:
(a) Aerobic (b) Anaerobic (c) Microaerophilic (d) Facultative
- (vi) The cell wall consists of two shells that overlap like a petridish in:
(a) Foraminifera (b) Actinopods (c) Slime molds (d) Diatoms
- (vii) Carcinogenic mycotoxins called aflatoxins are produced by:
(a) *Aspergillus* (b) *no italic* (c) *Neurospora* (d) *Ustilago*
- (viii) In *Anthoceros* sporophyte at the junction of foot and spore producing region there is a band of:
(a) Paraphysis (b) Meristematic tissue
(c) Phloem (d) Xylem
- (ix) The body cavity of Nematoda is called.
(a) Blastocoel (b) Haemocoel (c) Spongocoel (d) Pseudocoelom
- (x) Which Fish show modification of aquatic breathing system to meet the conditions of terrestrial life by developing lungs?
(a) Hagfish (b) Dogfish (c) Dipnoi (d) Shark
- (xi) The process by which a pH gradient across the membrane drives the formation of ATP:
(a) Chemiosmosis (b) Chemosynthesis (c) Photosynthesis (d) Carbon fixation
- (xii) Ammonia, a waste product of amino acid metabolism is converted to urea in:
(a) Kidney (b) Liver (c) Villi (d) Pancreas
- (xiii) In the lungs of birds instead of alveoli tiny thin walled ducts are present which are called:
(a) Tracheoles (b) Bronchioles (c) Air sacs (d) Parabronchi

- (xiv) The pathway involving system of adjacent cell walls which is continuous throughout the plant roots:
(a) Casparian strip (b) Apoplast (c) Symplast (d) Plasmodesmata
- (xv) Haemoglobin molecule in most cases, does not have B-chain in it, instead F chain is present
(a) Oedema (b) Leukemia (c) Thrombosis (d) Thalassaemia
- (xvi) The megasporophylls bearing ovules are not folded and joined at the margins to form an ovary:
(a) Filicineae (b) Monocotyledonae
(c) Dicotyledonae (d) Gymnospermae
- (xvii) Rubisco protein fixes oxygen instead of CO_2 .
(a) Glycolysis (b) Photorespiration (c) Krebs' cycle (d) Respiration

MODEL PAPER “BIOLOGY”

Intermediate Part-I Examination

SUBJECTIVE

Time: 2:40Hours

Marks: 68

SECTION -I

Note: Out of Questions Nos.2,3, and 4 write any 22 (Twenty two) short answers. While writing answer write question No. carefully.

(22x2)=44

Q.No.2. Write short answers.

- (i) Differentiate between deductive reasoning and inductive reasoning.
- (ii) How is a peptide bond formed?
- (iii) How does enzyme concentration affect the rate of reaction?
- (iv) What are polysomes?
- (v) Compare microtubules with microfilaments.
- (vi) What do you know about the capsid of a virus?
- (vii) Give the importance of plasmids.
- (viii) What is a hydroponic culture technique?
- (ix) What is the role of t RNA.
- (x) Give two differences between prokaryotic and eukaryotic cells.
- (xi) Differentiate between antiseptics and disinfectants.

Q.No.3. Write short answers.

- (i) What are the distinguishing characters of kingdom protoctista?
- (ii) List four adaptations of Bryophytes to terrestrial environment.
- (iii) Explain the evolution of megaphyll.
- (iv) Give a description of conidia in *Penicillium*.
- (v) Explain polymorphism in coelenterates.
- (vi) Differentiate between polychaeta and oligochaeta.
- (vii) Give four differences between Dicots and Monocots.
- (viii) What is the importance of *Archaeopteryx*?
- (ix) Compare an ascus with a basidium.
- (x) Give two differences between gymnosperms and angiosperms.
- (xi) How have reptiles been able to live on land?

Q.No.4. Write short answers.

- (i) What is meant by compensation point?
- (ii) What is the role of gastrin?
- (iii) Compare aerobic and anaerobic respiration.
- (iv) Differentiate between monocytes and lymphocytes.
- (v) What is photorespiration?

- (vi) How is food swallowed by you?
- (vii) Differentiate between single circuit and double circuit heart.
- (viii) What is diving reflex in cetaceans?
- (ix) Why do some plants feed on insects?
- (x) What is meant by preparatory and oxidative phase of glycolysis?
- (xi) Differentiate between apoplastic and symplastic pathway taken by water to reach the xylem tissue.

SECTION -II

Note: - Attempt any THREE questions.

(8x3)=24

- Q.No.5.** What are amino acids? Describe four levels of proteins structural organization.
How can the action of catalytic proteins be inhibited? (2+4+2)
- Q.No.6.** Define alternation of generations. Describe the evolution of seed. (1+7)
- Q.No.7.** Narrate the general characters of Arthropods. What is the importance of chitin in their life? (7+1)
- Q.No.8.** Describe light dependent reactions of photosynthesis. 8
- Q.No.9.** Discuss the evolution of vertebrate heart. 8

MODEL PAPER "MATHEMATICS"
Intermediate Part-I Examination
OBJECTIVE

Time: 30 Minutes

Marks: 20

Q.No.1. Note: Write answers to the questions on the objective answer sheet provided. You have four choices for each objective type question as A, B, C, and D. The choice which you think is correct; fill the circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling to or more circles will result in zero mark in that question. Attempt as many question as given in objective-type question paper and leave others blank.

- (i) The no. $\frac{22}{7}$ is called a:
(a) rational no. (b) irrational no. (c) integer (d) none of these
- (ii) The set $\{(a,b)\}$ is called:
(a) infinite set (b) singleton set (c) set with two elements (d) empty set
- (iii) A square matrix A is a skew hermitian if $(\bar{A})^t$ is equal to:
(a) A (b) -A (c) \bar{A} (d) A^t
- (iv) If the matrices A and B are conformable for multiplication, then $(AB)^t =$
(a) AB (b) BA^t (c) $A^t B^t$ (d) $B^t A^t$
- (v) If the roots of the quad equation $ax^2 + bx + c = 0$ are real and equal then
(a) $b^2 - 4ac > 0$ (b) $b^2 - 4ac = 0$ (c) $b^2 - 4ac < 0$ (d) none of these
- (vi) The product of the four fourth roots of unity is:
(a) 0 (b) 1 (c) -1 (d) i
- (vii) Partial fraction of $\frac{1}{(x+1)(x^2-1)}$ will be of the form:
(a) $\frac{A}{x+1} + \frac{Bx+c}{x^2-1}$ (b) $\frac{A}{x+1} + \frac{B}{x^2-1}$
(c) $\frac{A}{x-1} + \frac{B}{x+1} + \frac{C}{(x+1)^2}$ (d) none of these
- (viii) Arithmetic mean between 2a and 2b is:
(a) $\frac{a+b}{2}$ (b) $a+b$ (c) $\frac{2ab}{a+b}$ (d) none of these
- (ix) The sum of an infinite geometric series exists if:
(a) $|r| < 1$ (b) $|r| > 1$ (c) $r = 1$ (d) $r = -1$

- (x) $\sum_{k=1}^n K^2$ is equal to:
- (a) $\frac{n(n+1)}{2}$ (b) $\frac{n^2(n+1)^2}{4}$
- (c) $\frac{n(n+1)(2n+1)}{6}$ (d) none of these
- (xi) If A and B are disjoint events then $P(A \cup B) =$
- (a) $P(A) + P(B)$ (b) $P(A) - P(B)$
- (c) $P(A) - P(B) - P(A \cap B)$ (d) none of these
- (xii) If ${}^nC_8 = {}^nC_{12}$, then $n =$
- (a) 4 (b) 8 (c) 20 (d) 12
- (xiii) The expansion of $(1 + 2x)^{-2}$ is valid if:
- (a) $|x| < \frac{1}{2}$ (b) $|x| < 1$ (c) $|x| < 2$ (d) none of these
- (xiv) In one hour, the hour hand of a clock turns through:
- (a) $\frac{\pi}{8}$ radians (b) $\frac{\pi}{4}$ radians (c) $\frac{\pi}{6}$ radians (d) $\frac{\pi}{2}$ radians
- (xv) $\sin(2\theta) =$
- (a) $\frac{2 \tan \theta}{1 - \tan^2 \theta}$ (b) $\frac{2 \tan \theta}{1 + \tan^2 \theta}$ (c) $\frac{1 - \tan^2 \theta}{1 + \tan^2 \theta}$ (d) $\frac{1 + \tan^2 \theta}{1 - \tan^2 \theta}$
- (xvi) Period of $\sin \frac{x}{3}$ is:
- (a) π (b) 3π (c) $\frac{2\pi}{3}$ (d) 6π
- (xvii) If $\triangle ABC$ is right angle triangle, then the law of cosines reduces to:
- (a) The law of sines (b) The law of tangents
- (c) The pythagorus theorem (d) none of these
- (xviii) Radius of escribed circle opposite to the vertex A is:
- (a) $\frac{\Delta}{a}$ (b) $\frac{\Delta}{b}$ (c) $\frac{\Delta}{s-a}$ (d) none of these
- (xix) The domain of the principal tan function is:
- (a) $\left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$ (b) $(0, \pi)$ (c) \mathbb{R} (d) none of these
- (xx) The solution of the equation $\tan x = -\frac{1}{\sqrt{3}}$ is in:
- (a) I and II quadrants (b) I and III quadrants
- (c) II and IV quadrants (d) none of these

MODEL PAPER "MATHEMATICS"

Intermediate Part-I Examination

SUBJECTIVE SECTION - I

Time: 2:30Hours

Marks: 80

Note: Out of Questions Nos.2,3, and 4 write any 25 (Twenty five) short answers. While writing answer write question No. carefully.

Q.No.2. Write short answers.

- (i) Find multiplicative inverse of $(-4, 7)$
- (ii) Define a complex number.
- (iii) Define a semi-group.
- (iv) Show that the statement $(p \wedge q) \rightarrow p$ is a tautology.
- (v) Show $B - A$ by Venn diagram when A and B are overlapping Sets?
- (vi) if $A = \begin{bmatrix} 1 & 2 & 0 \\ 3 & 2 & -1 \\ -1 & 3 & 2 \end{bmatrix}$ show that $A + A'$ is symmetric.
- (vii) Without expansion verify that $\begin{vmatrix} \alpha & \beta + \gamma & 1 \\ \beta & \gamma + \alpha & 1 \\ \gamma & \alpha + \beta & 1 \end{vmatrix} = 0$.
- (viii) Define the rank of a matrix.
- (ix) Define a polynomial function and degree of polynomial.
- (x) Show that $1 + w^{37} + w^{38} = 0$
- (xi) When polynomial $x^3 + 2x^2 + 10x + 4$ is divided by $x - 2$, the remainder is 14. Find the value of k.
- (xii) If α, β are the roots of $5x^3 - x - 2 = 0$, form an equation whose roots are $\frac{3}{\alpha}, \frac{3}{\beta}$.

Q.No.3. Write short answers.

- (i) Resolve $\frac{2}{x^2 - 1}$ into partial fractions.
- (ii) What is a proper rational fraction?
- (iii) Which term of the A.P. 5, 2, -1, is -85
- (iv) If $\frac{1}{a}, \frac{1}{b}, \frac{1}{c}$ are in G.P. show that common ratio is $\pm \sqrt{\frac{a}{c}}$
- (v) If $a_{n-3} = 2n - 5$, find the n th term of the sequence.
- (vi) How many terms of the series $-9 - 6 - 3 + 0 + \dots$ amount to 66.
- (vii) If 5 is the H.M. between 2 and b then find b.
- (viii) Find the number of diagonals of a six sided figure.
- (ix) How many arrangements of the letters of the word PAKPATTAN taken all at time can be made.
- (x) A bag contains 40 balls out of which 5 are green, 15 are black and the remaining are yellow. A ball is taken out of the bag. Find the probability that the ball is yellow.
- (xi) State principle of mathematical induction.
- (xii) Expand $(1 + 2x)^{-1}$ up to 3 terms.

Q.No.4. Write short answers.

- (i) Define an angle.
- (ii) Prove that $I = rQ$
- (iii) Define a radian.
- (iv) Prove that $\operatorname{cosec} \theta + \tan \theta \sec \theta = \operatorname{cosec} \theta + \sec^2 \theta$.
- (v) Prove that $\frac{\cos 11^\circ + \sin 11^\circ}{\cos 11^\circ - \sin 11^\circ} = \tan(56^\circ)$
- (vi) Express $\sin 7x + \sin 5x$ as a product.
- (vii) Draw the graph of $y = \cos x$ from -90° to 90°
- (viii) What do you mean by the solution of a triangle?
- (ix) State any two laws of cosines in a triangle.
- (x) Prove that $r = \frac{\Delta}{S - a}$
- (xi) Find the area of a triangle ABC in which $b=21.6\text{cm}$, $c=30.2\text{m}$, and $\alpha = 52^\circ 40'$
- (xii) Prove that $\tan^{-1} \frac{1}{4} + \tan^{-1} \frac{1}{5} = \tan^{-1} \left(\frac{9}{19} \right)$
- (xiii) Find the solution set of the equation $\sin x = \frac{1}{2}$

SECTION - II

Note: Attempt any THREE questions. All questions carry equal marks.

- Q.No.5. (a) If a, b are elements of a group G then show that $(ab)^{-1} = b^{-1}a^{-1}$
- (b) Show that $\begin{vmatrix} a+l & a & a \\ a & a+l & a \\ a & a & a+l \end{vmatrix} = l^2 (3a+l)$
- Q.No.6. (a) Prove that $\frac{x^2}{a^2} + \frac{(mx+c)^2}{b^2} = 1$ has equal roots, if $c^2 = a^2m^2 + b^2, a \neq 0, b \neq 0$
- (b) Find 'n' so that $\frac{a^{n+1} + b^{n+1}}{a^n + b^n}$ may be H.M. between a and b .
- Q.No.7. (a) Prove that ${}^{n-1}C_r + {}^{n-1}C_{r-1} = {}^nC_r$
- (b) Use mathematical induction to prove that $x+y$ is a factor of $x^{2n-1} + y^{2n-1} (x \neq -y)$
- Q.No.8. (a) Find the values of the trigonometric functions of the angle $\frac{235}{2}\pi$.
- (b) Prove that $\cos 20^\circ \cdot \cos 40^\circ \cdot \cos 60^\circ \cdot \cos 80^\circ = \frac{1}{16}$
- Q.No.9. (a) Define inscribed circle and prove that $r = \frac{\Delta}{S}$
- (b) Prove that $\sin^{-1} \left(\frac{77}{85} \right) - \sin^{-1} \left(\frac{3}{5} \right) = \cos^{-1} \left(\frac{1}{7} \right)$

MODEL PAPER "STATISTICS"

Intermediate Part-I Examination

OBJECTIVE

Time: 20 Minutes

Marks: 17

Q.No.1. Note: Write answers to the questions on the objective answer sheet provided. You have four choices for each objective type question as A, B, C, and D. The choice which you think is correct; fill the circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling to or more circles will result in zero mark in that question. Attempt as many question as given in objective-type question paper and leave others blank.

- (i) If 'a' is a constant, then $\sum_{i=1}^5 a$ equals:
(a) $a_1+a_2+a_3+a_4+a_5$ (b) a_5 (c) $5a$ (d) $a+5$
- (ii) Statistics are:
(a) Aggregate of facts and figures (b) Always true
(c) Always continuous (d) Always qualitative
- (iii) A graph of a cumulative frequency distribution is called:
(a) Frequency curve (b) Frequency polygon (c) Ogive (d) Histogram.
- (iv) Census returns are :
(a) Primary data (b) Secondary data
(c) Qualitative data (d) True data.
- (v) The harmonic mean of two numbers 'a and b' is :
(a) $\frac{2}{a+b}$ (b) $\frac{ab}{a+b}$ (c) $\frac{2ab}{a+b}$ (d) $\frac{a+b}{ab}$
- (vi) The sum of deviations taken from A.M. is:
(a) 1 (b) $\sum f$ (c) n (d) zero
- (vii) If left tail is longer than the right tail, then distribution is called:
(a) Negatively skewed (b) Positively skewed
(c) Symmetrical (d) None
- (viii) The first moment about mean is equal to:
(a) Variance (b) Zero (c) Mean (d) Standard deviation
- (ix) If all items are given equal weights, the index Number is called:
(a) Weighted (b) Un-weighted (c) Simple (d) None
- (x) An index number is called composite index when it is computed from:
(a) Simple variable (b) Bi-variable
(c) Multiple variable (d) None of them
- (xi) The number of permutations of 'r' objects taken out of total 'n' objects is:
(a) nC_r (b) nP_r (c) nC_x (d) Nc_n
- (xii) The probability of sure event is:
(a) Zero (b) Negative (c) One (d) None
- (xiii) Two events A and B are called mutually exclusive if:
(a) $P(A \cup B) = \phi$ (b) $P(AB) = \phi$ (c) $P(A \cap B) = S$ (d) $P(A \cap B) = 1$

- (xiv) A set of numerical values assigned to a sample space is called:
(a) Random variable (b) Random sample
(c) Random numbers (d) Random experiment
- (xv) $\text{Var}(4x+8)$ is:
(a) $12 \text{ Var}(X)$ (b) $4 \text{ Var}(X)+8$ (c) $16 \text{ Var}(X)$ (d) $16 \text{ Var}(X)+8$
- (xvi) The binomial distribution is negatively skewed if:
(a) $p < \frac{1}{2}$ (b) $p = \frac{1}{2}$ (c) $p > \frac{1}{2}$ (d) $p = 1$
- (xvii) The mean of the hyper-geometric distribution is:
(a) $\frac{nk}{N}$ (b) $\frac{Nk}{n}$ (c) $\frac{Nn}{k}$ (d) $\frac{n+k}{N}$

MODEL PAPER "STATISTICS"

Intermediate Part-I Examination

SUBJECTIVE

Time: 2:40Hours

Marks: 68

SECTION -I

Note: Out of Questions Nos.2,3, and 4 write any 22 (Twenty two) short answers. While writing answer write question No. carefully.

Q.No.2. Write short answers. (22x2)=44

- (i) Define Statistics.
- (ii) Differentiate between variable and constant.
- (iii) Distinguish between Primary and Secondary data.
- (iv) Define class limit and class boundary
- (v) Define classification.
- (vi) Define tabulation.
- (vii) Write down the important points to prepare a good table.
- (viii) In a moderately asymmetrical distribution the value of median is 53 and the value of mode is 50. Determine the mean.
- (ix) The mean of n value is 8. If a new value 28 is included, the mean becomes 9. find the value of n.
- (x) What is meant by measures of central tendency?
- (xi) Write the qualities of a good average.

Q.No.3. Write short answers.

- (i) The first four moments about the A.M. of a distribution are 0.4, 48, and 48. Find b_2 .
- (ii) Explain the moments about mean.
- (iii) Write mathematical properties of S.D.
- (iv) Distinguish between simple and composite index numbers.
- (v) Explain the meaning of consumer price index number.
- (vi) Given $W = 20, 25, 30, 40$ and $I = \frac{P_n}{P_0} \times 100 = 100, 105, 110, 120$. Find consumer price index number.
- (vii) Given the following information: $\sum p_n q_n = 4220$, $\sum p_0 q_n = 3520$, $\sum p_n q_n = 4810$ and $\sum p_n q_n = 4020$. Find Marshal- Edge worth index.
- (viii) Differentiate between absolute and relative dispersion.
- (ix) Define Mean deviation.
- (x) What are weighted Index numbers.
- (xi) What are properties of variance.

Q.No.4. Write short answers.

- (i) Write the statement for addition law of probability for any 2 events.
- (i) Prove addition law for mutually exclusive events.
- (ii) Define a random variable.
- (iii) If $P(A) = 0.7$, $P(B) = 0.5$ and $P(B/A) = 0.5$, find $P(A/B)$.
- (iv) If 3 coins are tossed, what is the probability of getting at most two heads?
- (v) Given $E(X+4) = 10$ and $E(X+4)^2 = 116$, determine $\text{Var}(X)$.
- (vi) Write properties of mathematical expectation.
- (vii) Write formulas of mean and variance of the binomial distribution.
- (viii) Write the properties of binomial experiment.
- (ix) Define Hyper geometric distribution.
- (x) In a binomial distribution, the mean is 3 and standard deviation is 1.5. find its parameters.
- (xi) Define classification.

SECTION -II

Note: - Attempt any THREE questions.

(8x3)=24

Q.No.5.

(a) Draw an ogive for the following data

Groups	10-19	20-29	30-39	40-49	50-59	60-69
No of Boys	15	20	25	30	15	10

(b) The frequency distribution given below has been derived from the use of working origin. If $D=X-18$, find A.M. and H.M.

D	-12	-8	-4	0	4	8	12
F	2	5	8	18	22	13	8

Q.No.6.

- (a) A variable Y is obtained from a variable X by the equation $Y=2X$ (5). Determine the Y values when the X value are 3,6,2,1,7,5. verify that $V_{ax}(Y) = 4V_{ax}(X)$
- (b) The first four moments about $X=20$ of a distribution are -2,38, -104 and 3088. find out whether the distribution is leptokurtic, meso kurtic or platykurtic.

Q.No.7.

(a) Construct the chain indices for the following data for price relatives for 1941 to 1944

Year	Sugar	Gur	Tea
1941	98	75	82
1942	100	82	74
1943	114	83	78
1944	109	84	89

- (b) Give the following information:
 $\sum p_0q_0 = 3600$, $\sum p_1q_0 = 4300$, $\sum p_0q_1 = 4100$ and $\sum p_1q_1 = 4890$. Show That Fishers ideal price index number is the G.M. of Laspyres and Pasche's price index numbers.

Q.No.8.

- (a) A bag contains 7 white, 5 black and 4 red balls. If two balls are drawn at random, find the probability that:
 (i) both balls are white (ii) one is black and other is red.
- (b) A function is given by $f(x) = \frac{3+2x}{18}$, $2 \leq x \leq 4$. show that it is probability density function and find the Probability
 That (i) $x \geq 2.5$ (ii) $x < 3.5$

Q.No.9.

- (a) Find the mean and S.D. of the binomial $(q+p)^3$
- (b) Five balls are drawn from a box containing 4 white and 7 black balls. If X denotes the number of black balls drawn from the box, then obtain the probability distribution of X. Find the mean and variance of this distribution.

MODEL PAPER "COMPUTER SCIENCE"

Intermediate Part-I Examination

OBJECTIVE

Time: 20 Minutes

Marks: 15

Q.No.1. Note: Write answers to the questions on the objective answer sheet provided. You have four choices for each objective type question as A, B, C, and D. The choice which you think is correct; fill the circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling to or more circles will result in zero mark in that question. Attempt as many question as given in objective-type question paper and leave others blank.

- (i) Which function key is used for checking spellings and grammar in Excel?
(a) F1 (b) F2 (c) F7 (d) F12
- (ii) Digitizing/Graphic table is a/an _____ device.
(a) Output device (b) Scanning Device
(c) Pointing Device (d) None of these
- (iii) EL stand for
(a) Electrical Luminescent Display (b) Energy-Luminescent Display
(c) Electro-Luminescent Display (d) None of these
- (iv) 1 Terabyte equals to _____ bytes.
(a) 1024 (b) $1024 * 1024 * 1024$
(c) $1024 * 1024 * 1024 * 1024$ (d) None of these
- (v) Each location in primary storage is assigned a unique
(a) Data (b) Fields (c) Name (d) Address
- (vi) _____ keeps track of the program during execution.
(a) Address register (b) Program counter register
(c) Data register (d) Accumulator register
- (vii) Information travels between components of a computer through groups of wires called
(a) Cards (b) Busses (c) Slots (d) Ports
- (viii) Stored instructions and data in a digital computer consists of
(a) Alphabets (b) Numerals (c) Bits (d) All of these
- (ix) A digital computer system consists of a Central Processing Unit (CPU) interfaced with
(a) Input devices (b) Auxiliary storage (c) Output devices (d) All of these
- (x) What layer of the OSI Model does data compression
(a) Network (b) Data Link (c) Presentation (d) All of these
- (xi) Which of the following access methods listens to the cable for network traffic before sending data?
(a) Token passing (b) Polling (c) CSMA/CA (d) CSMA/CD
- (xii) In a networking environment, a network adapter card driver is needed for:
(a) Communication with other adapter cards on a network
(b) Communication between the file server and the other computer on the network
(c) Communication between the adapter card and the computer's operating system
(d) Communication between different types of computers on a network

- (xiii) Which of the following statement best describes a star topology?
(a) Needs significantly less cabling than other topologies
(b) Breaks in a single cable segment takes down entire network
(c) More difficult to reconfigure than other topologies
(d) Centralized monitoring and management
- (xiv) A program that performs a useful task and at the same time carries out some secret destructive act, is known as a
(a) Sabotage (b) Trojan horse (c) Worm (d) Logic bomb
- (xv) The most common protocol used for uploading and downloading files between computer is
(a) TCP/IP (b) NNTP (c) FTP (d) Telnet

MODEL PAPER “COMPUTER SCIENCE”

Intermediate Part-I Examination

SUBJECTIVE

Time: 2:10Hours

Marks: 60

SECTION –I

Note: Out of Questions Nos.2,3, and 4 write any 18(Eighteen) short answers. While writing answer write question No. carefully.

Q.No.2. Write short answers.

(18x2)=36

- (i) What is Information and Technology? How has it made our world a global village?
- (ii) What is computer?
- (iii) Differentiate between hardware and software. Also give examples.
- (iv) Differentiate between De Facto and De Jure.
- (v) Explain workgroup computing.
- (vi) Is BUS topology easy to install and extend? Prove your claim with valid arguments.
- (vii) What is data communication? Name its three modes.
- (viii) Differentiate between guided and unguided media.
- (ix) What is Modem? What are its different types?

Q.No.3. Write short answers.

- (i) Write down the three uses of computers in various fields.
- (ii) What is computer simulation? Explain.
- (iii) What is RAM? What are its different types?
- (iv) Briefly describe bus interconnection.
- (v) What is function of General Purpose Registers?
- (vi) Explain different steps involved in Instruction Execute Cycle.
- (vii) Differentiate between interpreter and compiler.
- (viii) Describe boot sector virus.
- (ix) Write down two causes of computer virus.

Q.No.4. Write short answers.

- (i) Differentiate between multitasking and multiprocessing.
- (ii) What is a word processor?
- (iii) What is the difference between copy and cut?
- (iv) What are the two modes of typing?
- (v) How a document is printed in MS Word?
- (vi) What is a spreadsheet program?

- (vii) What is meant by cell reference?
- (vii) What are functions? Write the function to find average of cells between B 1 and B10.
- (viii) What is Web browsing? Write two limitations of email.

SECTION -II

Note: - Attempt any THREE questions.

8x3=24

- Q.No5. Describe the OSI Model with special emphasis on the layers of OSI Model. **8**
- Q.No6. What is data coding? Describe different data coding schemes **8**
- Q.No7. What is a system? Illustrate briefly System Development Life Cycle. **8**
- Q.No8. What is data communication? Define the basic component of communication network. **8**
- Q.No9. Explain the architecture of computer system. **8**

MODEL PAPER "ECONOMICS"

Intermediate Part-I Examination

OBJECTIVE

Time: 30 Minutes

Marks: 20

Q.No.1. Note: Write answers to the questions on the objective answer sheet provided. You have four choices for each objective type question as A, B, C, and D. The choice which you think is correct; fill the circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling to or more circles will result in zero mark in that question. Attempt as many question as given in objective-type question paper and leave others blank.

- (i) Who is known / called as the founder of Economics?
(a) Recardo (b) J.S. Mill (c) Robbins (d) Adam Smith
- (ii) When the total utility of a commodity is maximum the marginal utility is
(a) Negative (b) Zero (c) Positive (d) Maximum
- (iii) The Elasticity of demand of durable goods is:
(a) Less then unity (b) Greater than unity (c) Equal to unity (d) Zero
- (iv) The Elasticity of Demand of substitutes is:
(a) More Elastic (b) Less Elastic (c) Zero Elastic (d) Infinite Elastic
- (v) When the supply of a commodity increases without change in price it is called:
(a) Fall in supply (b) Expansion in supply
(c) Contraction in supply (d) Rise in supply
- (vi) Due to the Equal decrease in Demand & Supply the price:
(a) Increases (b) Decreases (c) In the same (d) None of these
- (vii) Reward of which factor of production is not pre-determined?
(a) Labour (b) Land (c) Entrepreneur (d) Capital
- (viii) The Law of increasing return is also called as the Law of:
(a) Increasing Costs (b) Decreasing Costs (c) Equal Costs (d) None of these
- (ix) In general the Law of Diminishing return applies to:
(a) Trade (b) Industry (c) Agriculture (d) None of these
- (x) The increase in total cost due to the production of an extra unit is known as:
(a) Average Cost (b) Variable Cost (c) Marginal Cost (d) Fixed Cost
- (xi) The demand curve for Monopolist is also called as:
(a) Total Revenue (b) Average Revenue (c) Marginal Revenue (d) None of these
- (xii) Kinds of Market according to time-period are
(a) 02 (b) 03 (c) 04 (d) 06
- (xiii) The concept of Quasi-Rent was introduced by:
(a) Marshall (b) Ricardo (c) Keynes (d) Malthus
- (xiv) Under Marginal Productivity Theory the reward for labour is determined by:
(a) Owner (b) Government (c) Labour (d) Marginal Product.

- (xv) The rent on Marginal-Land is:
(a) Maximum (b) Minimum (c) Zero (d) None of these
- (xvi) With decrease in rate of Interest, the price of Bonds:
(a) Decreases (b) Increases (c) Does not change (d) None of these
- (xvii) How many stages are there in the Law of Variable-Proportions?
(a) 02 (b) 03 (c) 04 (d) 05
- (xviii) The geographical mobility is not possible:
(a) Labour (b) Capital (c) Land (d) Organization
- (xix) When marginal revenue is zero, total revenue is:
(a) Minimum (b) Maximum (c) Zero (d) Decreasing
- (xx) Which organization can sell the shares in the open market?
(a) Partnership (b) Pvt Ltd Company
(c) Public Limited Company (d) Co-op-Society

MODEL PAPER “ECONOMICS”
Intermediate Part-I Examination

SUBJECTIVE

Time: 2:30Hours

Marks: 80

SECTION -I

Note: Out of Questions Nos.2,3, and 4 write any 25(Twenty five) short answers. While writing answer write question No. carefully.

Q.No.2. Write short answers. (25x2)=50

- (i) What is Economic problem?
- (ii) Define Normative Science.
- (iii) What is Micro Economic?
- (iv) What is consumption?
- (v) What is Negative utility?
- (vi) Define indifference curve.
- (vii) What is classification?
- (viii) What is the difference between Equation and Identical Equation?
- (ix) Define parameters.
- (x) What is meant by change in demand?
- (xi) Define cross Elasticity of demand.
- (xii) Why the more Elastic commodities are not taxed?

Q.No.3. Write short answers.

- (i) Differentiate between supply and stock..
- (ii) What is “zero elasticity of supply”.
- (iii) Define Law of supply.
- (iv) What is equilibrium price?
- (v) What is meant by change in equilibrium?
- (vi) Define perishable commodities.
- (vii) Define production function.
- (viii) What is bargaining power of labor?
- (ix) What is meant by the mobility of capital?
- (x) Define scale of production.
- (xi) What is meant “by Product”?
- (xii) What is the relationship between Law of return with laws of costs?

Q.No.4. Write short answers.

- (i) Define short run costs.
- (ii) What is the relationship between Average and Marginal cost.
- (iii) What is the difference between short runperiod and long runperiod?

- (iv) Describe the characteristics of perfect competition.
- (v) What is meant by the equilibrium of a firm?
- (vi) What is the relationship between average revenue and marginal under revenue Monopoly?
- (vii) What is meant by market?
- (viii) Define local Market?
- (ix) Describe the essentials of a market.
- (x) What is meant by "marginal land"?
- (xi) What is zero rate of interest?
- (xii) What is meant by the marginal revenue product?

SECTION -II

Note: - Attempt any THREE questions.

(10x3)=30

- Q.No5. Critically evaluate the definition of Economics given by Alfred Marshall. 10
- Q.No6. Analyses the characteristics of indifference curves. 10
- Q.No7. Solve the Equations given below: 10
 - (i) $8x + 2 = 18$
 - (ii) $2(x+5) = 2(x-2)$
- Q.No8. Describe the practical importance of elasticity of demand. 10
- Q.No9. Compare and contrast the Equilibrium of a firm under perfect competition and monopoly 10

ماڈل پیپر "معاشیات"

برائے انٹرمیڈیٹ امتحان پارٹ-1

حصہ معروضی

وقت: 30 منٹ

کل نمبر: 20

سوال نمبر 1۔ تمام سوالات کے جوابات دی گئی جوابی کاپی پر لکھیے۔ ہر سوال کے 4 (چار) ممکنہ جواب A، B، C اور D دیئے گئے ہیں جس جواب کو آپ درست سمجھیں جوابی کاپی پر اس سوال نمبر کے سامنے A، B، C یا D کے سامنے دیئے گئے دائروں میں سے ایک دائرے کو ٹین یا مارکر کی سیاہی سے بھر دیں۔

- | | | | | | |
|--------|--|---------------------|--------------------|--------------------|--------------------|
| (i) | درج ذیل میں سے کون سا معیشت دان معاشیات کا بانی کہلاتا ہے؟ | (الف) ریکارڈو | (ب) جے۔ ایس۔ میل | (ج) رابنز | (د) ایڈم سمٹھ |
| (ii) | جب کسی شے کا کل افادہ زیادہ سے زیادہ ہو تو ختم افادہ ہوتا ہے۔ | (الف) حقیقی | (ب) صفر | (ج) مثبت | (د) زیادہ سے زیادہ |
| (iii) | پائیدار اشیاء کی طلب کی پلک ہوتی ہے۔ | (الف) اکائی سے کم | (ب) اکائی سے زیادہ | (ج) اکائی کے برابر | (د) صفر |
| (iv) | نعم البدل والی اشیاء کی طلب کی پلک ہوتی ہے۔ | (الف) زیادہ پلک دار | (ب) کم پلک دار | (ج) صفر پلک | (د) لامحدود پلک |
| (v) | جب قیمت میں تبدیلی کے بغیر کسی شے کی رسد بڑھ جائے تو اسے کہتے ہیں۔ | (الف) رسد کا گھٹنا | (ب) رسد کا پھیلنا | (ج) رسد کا سکڑنا | (د) رسد کا بڑھنا |
| (vi) | جب رسد اور طلب میں یکساں کمی ہو تو قیمت۔ | (الف) بڑھ جاتی ہے | (ب) کم ہو جاتی ہے | (ج) برابر رہتی ہے | (د) کوئی بھی نہیں |
| (vii) | کون سے عامل پیداوار کا معاوضہ پہلے سے طے شدہ نہیں ہوتا؟ | (الف) محنت | (ب) زمین | (ج) آجر | (د) سرمایہ |
| (viii) | قانون بحشر حاصل کا دوسرا نام ہے۔ | (الف) بحشر مصارف | (ب) تقلیل مصارف | (ج) یکسانی مصارف | (د) کوئی بھی نہیں |
| (ix) | عام طور پر قانون تقلیل حاصل کا نفاذ کس شعبہ پر ہوتا ہے؟ | (الف) تجارت | (ب) صنعت | (ج) زراعت | (د) کوئی بھی نہیں |
| (x) | کسی شے کی زائد اکائی پیدا کرنے سے کل لاگت میں اضافہ کہلاتا ہے۔ | (الف) اوسط اخراجات | (ب) حشر اخراجات | (ج) ختم اخراجات | (د) معین اخراجات |
| (xi) | اچارہ دار کا خط طلب کہلاتا ہے۔ | (الف) کل وصولی | (ب) اوسط وصولی | (ج) ختم وصولی | (د) کوئی بھی نہیں |
| (xii) | عرصہ وقت کے لحاظ سے منڈی کی قسمیں ہوتی ہیں۔ | (الف) دو | (ب) تین | (ج) چار | (د) چھ |

(xiii)	نام نہاد لگان کا تصور کس نے پیش کیا؟	(الف) مارشل	(ب) ریکارڈو	(ج) کنز	(د) مانٹس
(xiv)	نظریہ مختتم پیداواروں کے مطابق مزدور کے معاوضہ کا تعین کرتا ہے۔	(الف) مالک	(ب) حکومت	(ج) مزدور	(د) مختتم پیداوار
(xv)	مختتم زمین پر لگان ہوتا ہے۔	(الف) زیادہ سے زیادہ	(ب) کم سے کم	(ج) صفر	(د) کوئی بھی نہیں
(xvi)	شرح سود کم ہونے سے باظروں کی قیمت۔	(الف) کم ہو جاتی ہے	(ب) بڑھ جاتی ہے	(ج) تبدیل نہیں ہوتی	(د) کوئی بھی نہیں
(xvii)	قانون حقیر تناسبات کے مراطل ہوتے ہیں۔	(الف) دو	(ب) تین	(ج) چار	(د) پانچ
(xviii)	جغرافیائی حرکت پذیری ممکن نہیں ہے۔	(الف) محنت	(ب) سرمایہ	(ج) زمین	(د) معیہ
(xix)	مختتم وصولی صفر ہو تو کل وصولی ہوتی ہے۔	(الف) کم سے کم	(ب) زیادہ سے زیادہ	(ج) صفر	(د) کم ہو رہی ہوتی ہے
(xx)	کون سی معیہ اپنے حصص عام بازار میں فروخت کر سکتی ہے۔	(الف) شراکت	(ب) پرائیویٹ لمیٹڈ کمپنی	(ج) پبلک لمیٹڈ کمپنی	(د) امین امداد باہمی

ماڈل پیپر "معاشیات"

برائے انٹرمیڈیٹ امتحان پارٹ-1

(حصہ انشائی)

کل نمبر: 80

وقت: 2:30 گھنٹے

نوٹ۔ سوال نمبر 2، 3 اور 4 میں سے کوئی سے 25 (پچیس) مختصر سوالات کے جوابات تحریر کریں جو اب تحریر کرتے وقت سوال کا نمبر ضرور تحریر کریں۔

25x2=50

حصہ اول

سوال نمبر 2۔ مختصر سوالات کے جوابات تحریر کریں۔

- معاشی مسئلہ سے کیا مراد ہے؟
- علم الہدایت کی تعریف بیان کیجئے؟
- جڑوی معاشیات سے کیا مراد ہے؟
- صرف دولت سے کیا مراد ہے؟
- حقیقی افادہ سے کیا مراد ہے؟
- خط عدم ترجیح کی تعریف کیجئے۔
- جماعت بندی سے کیا مراد ہے؟
- مساوات اور متماثلہ میں کیا فرق ہے؟
- علاقہ ساکنات اور ایمرز کی تعریف کیجئے۔
- طلب میں تبدیلی سے کیا مراد ہے۔
- مستطیع لپک کی تعریف بیان کیجئے۔
- زیادہ گھلدار اشیاء پر ٹیکس کیوں نہیں لگایا جاتا۔

سوال نمبر 3۔ مختصر سوالات کے جوابات تحریر کریں۔

- رشد اور ذخیرہ میں فرق بیان کیجئے۔
- رشد کی منفرد لپک سے کیا مراد ہے؟
- قانون رشد کی تعریف بیان کیجئے۔
- توازنی قیمت سے کیا مراد ہے؟
- توازن میں تبدیلی سے کیا مراد ہے؟
- نیایع پزیر اشیاء کی تعریف بیان کیجئے۔
- تقاضی پیداؤش کی تعریف بیان کیجئے۔
- محنت کی قوت سودا بازی سے کیا مراد ہے؟
- سرمایہ کی حرکت پذیری سے کیا مراد ہے؟
- بیانہ پیداؤش کی تعریف بیان کیجئے۔
- ضمنی پیداوار سے کیا مراد ہے؟
- قوانین حاصل کا قوانین معارف کے ساتھ کیا تعلق ہے؟

سوال نمبر 4۔ مختصر سوالات کے جوابات تحریر کریں۔

- (i) عرصہ قلیل کے مصارف سے کیا مراد ہے؟
- (ii) اوسط اور مختتم مصارف میں کیا تعلق ہے؟
- (iii) عرصہ قلیل اور عرصہ طویل میں فرق بیان کیجئے۔
- (iv) مکمل مقابلہ کی خصوصیات بیان کریں۔
- (v) فرم کے توازن سے کیا مراد ہے؟
- (vi) اجارہ داری کے تحت اوسط وصولی اور مختتم وصولی کے درمیان کیا تعلق ہے۔
- (vii) منڈی کا مفہوم بیان کریں۔
- (viii) مقامی منڈی کی تعریف بیان کیجئے۔
- (ix) منڈی کے لوازمات بیان کیجئے۔
- (x) مختتم زمین سے کیا مراد ہے؟
- (xi) صفر شرح سود سے کیا مراد ہے؟
- (xii) مختتم پیداوار کی مالیت سے کیا مراد ہے؟

حصہ دوم

نوٹ:- مندرجہ ذیل میں سے صرف تین سوالات کے جوابات تحریر کریں۔

$$30 = 10 \times 3$$

10

10

10

10

10

10

سوال نمبر 5۔ مارشل کی بیان کردہ معاشیات کی تعریف کا تنقیدی جائزہ پیش کریں۔

سوال نمبر 6۔ خطوط عدم ترجیح کی خصوصیات کا تجزیہ کیجئے۔

سوال نمبر 7۔ درج ذیل مساواتوں کو حل کریں۔

$$(i) 8X + 2 = 18$$

$$(ii) 2(X + 5) = 2(X - 2)$$

سوال نمبر 8۔ طلب کی لچک کی عملی اہمیت بیان کریں۔

سوال نمبر 9۔ مکمل مقابلہ اور اجارہ داری کے تحت فرم کے توازن کا موازنہ کریں۔