



ANEES HUSSAIN COACHING CLASSES

EXCELLENCE IN EDUCATION SINCE 1989

COMPREHENSIVE EXAMINATION 2023-24

ENGLISH H.S.C. PART-I (PRE. ENGINEERING & MEDICAL)

According to the syllabus of the Board of Intermediate Education, Karachi



Time allowed: 20 Minutes

SECTION 'A'

Max. Marks: 20

(MULTIPLE CHOICE QUESTIONS)

- NOTE:**
- This section consists of 20 part questions and all are to be answered. Each question carries 1 mark.
 - The correct answer bubble must be filled on OMR sheet 1) (A) (B) (C) (D) provided with answer script.
 - Use only blue / black ballpoint pen or pointer on OMR sheet.
 - Avoid using pencil / white-o pen on OMR sheet.

Q. 1: Choose the correct answer for each from the given options:

- The word Singapore means:**
(A) tiger (B) lion (C) elephant (D) zebra
- Those discussing about school during work were:**
(A) Miners (B) coloured people (C) bookers (D) worker
- _____ wants to be the first person to interview Kreton**
(A) power (B) Roger spelding (C) Aid (D) John
- Boundless and bare is an example of:**
(A) meter (B) apostrophe (C) Alliteration (D) none
- Loisal bought a dress with money he had saved for _____**
(A) Rifle (B) mobile (C) plot (D) business
- The writer of the play 'A visit to a Small Planet' is _____.**
(A) Spelding (B) Kreton (C) Gore Vidal (D) General Powers
- During world war II, transmission of information was in the form of:**
(A) material (B) electric (C) analogue (D) catalogue
- Kreton considered human civilization as:**
(A) primitive (B) modern (C) conservative (D) progressive
- Mathilde looked _____ having spent her 10 years repaying the debt.**
(A) Beautiful (B) old woman (C) mature (D) nervous
- Stephen leacock deposited _____ dollars in the bank .**
(A) 55 (B) 56 (C) 57 (D) 58
- In every work of genius, we recognize our own rejected _____**
(A) thoughts (B) ideas (C) concepts (D) motives
- Insist on yourself; never _____**
(A) imitate (B) indicate (C) imply (D) initiate
- Job is _____ term strategy**
(A) long (B) short (C) medium (D) none of these
- Strong retreat for a happy man is his _____.**
(A) heart (B) thoughts (C) mind (D) conscience
- When things seem worst, we should _____**
(A) run away (B) take some other way
(C) stick to them (D) stop moving ahead
- In the sentence 'He opened market in the name of Allah '. The underlined verb is:**
(A) Transitive (B) intransitive (C) auxiliary (D) modal
- 'The shop opened at 10:00am .' The underlined verb is:**
(A) Transitive (B) intransitive (C) auxiliary (D) modal
- The superlative degree of the word few is**
(A) fewest (B) fewer (C) more few (D) most few
- The past tense of the verb hit is:**
(A) hited (B) hitted (C) hiten (D) hit
- The head teacher _____ collected the lost information to solve the mystery:**
(A) re (B) dis (C) miss (D) un

NORTH NAZIMABAD CAMPUS I	NORTH NAZIMABAD CAMPUS II	GULSHAN	NORTH KARACHI	BAHADURABAD	GULISTAN-E-JOHAR
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Time allowed: 2 hour 40 Minutes

SECTION 'B'

Max. Marks: 80

(SHORT-ANSWER QUESTIONS)

GENERAL INSTRUCTION:

Section 'B': Attempt any **Ten part** question from this section, selecting at least two part questions from each sub section. Answer should not exceed six sentences. All questions carry equal marks. (40 Marks)

Section 'C': It consists of 4 Descriptive questions. Answer **all** the questions. (40 Marks)

Q. 2:

(40 Marks)

SUB SECTION I – (Reading Comprehensive)

- Why is self-reliance important for one's development?
- Why was the boy inspired to go to Hampton?
- How Singapore keeps itself clean?
- What kind of suggestion did imam Ghazali give to the people?

SUB SECTION II- (POETRY)

- Discuss how the poem "Don't Quit" helps the reader to be optimistic in every situation?
- Why does the poet suggest people to be like good timber'?
- Briefly narrate the tragic story of Lucy Gray?
- Explain briefly, how Sir Henry Wotton's happy man is having nothing yet hath all?

OR Identify the poem and the poetic devices used in the following lines:

Where thickest lies the forest growth
 We find the patriarchs of both
 And they hold counsel with the stars
 Whose broken branches show the scars
 Of many winds and much strife.
 This is the common law of life.

SUB SECTION III – (PLAY.. "A Visit to a Small Planet")

- Why did Kreton want to visit Earth?
- How much advanced is the civilization of Kreton than of the Earth?
- Who is your favourite character in this play and why?
- How is Kreton able to communicate with the people on earth?
- Why did Kreton want to visit earth?

SUB SECTION IV – (GRAMMAR)

xiv) **Change the narration.**

- The teacher said the students, "Drop your pen."
- She said, "Two and two makes four."
- Kinza said, "What did he throw out of the window?"
- She said, "wow! " I have won the match ."

xv) **Change the voice.**

- Islam preaches tolerance .
- Do it yourself .
- Why did you submit the documents?
- Did he remind everyone of the upcoming trip?

xvi) **Spot the errors and do the correction of verb, preposition and adjective in the following sentences.**

- Habib tower is tallest building of this city .
- One of my books are missing.
- He is senior than you.
- Did you hear what did he say?

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xvii) Do as directed:

- Did you request him to come early said ali (Punctuate)
- If I were you,..... (complete the sentence)
- Raza went to the doctor. He was suffering from fever. (Make a complex sentence)
- You _____ try to lose weight. (Insert modal verb showing advice)

SECTION 'C'

(DETAILED-ANSWER QUESTIONS)

Note: Attempt all questions from this section. All questions carry equal marks.

(40 Marks)

Q3: Read the following passage and answer the questions that follow:

(10)

OR

Make a précis of the passage and suggest a suitable title to it.

Rain falls from clouds for the same reason anything falls to Earth. The Earth's gravity pull it. Every cloud is made of water droplets. The droplets in clouds are exceedingly small. The effect of gravity on them is minute. Air current moves and lifts droplets so that the net downward displacement is zero, even though the droplets are in constant motion. The average size of a cloud droplet is only 0.0004 inch in diameter. Only when the droplet grows to a diameter of 0.0008 inch or larger, it can fall from the cloud. The average rain drop contains a million times more water as compared to a tiny cloud droplet. The growth of cloud droplet to a size large enough to fall out is the cause of rain. This important growth process is called coalescence

- Give suitable title of the above passage. (2)
- What is the average size of cloud droplet? (2)
- Give meanings of the following words: (2)
 - Exceedingly
 - Motion
- Identify regular and irregular verbs (4)
 - Falls
 - Pull
 - Made
 - called

Q4: Write an email to the Producer of ABC channel requesting for motivational programmes on education. (10)

OR

Write a Report about student week held in the college (including events, days and dates).

Q5: Write a narrative account of an incident that influenced you greatly. Write an essay on Facebook in learning and teaching. (10)

OR

Write an essay to compare and contrast on any one of the following:

- Physical Classes v/s Online classes
- Football v/s Cricket.

Q6: A well-reputed school in Clifton requires the following staff: (10)

- Experienced Head for Primary Section.
- Senior Teachers for Science and English.

The candidate should be a Science graduate with work experience of at least 2 years. Send your Handwritten Resume along with an application to P.O. Box No. 3462, C/o Daily Dawn, Karachi.

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کل نشانات: ۱۰۰

اردو لازمی (سال اول) آزمائشی امتحان ۲۰۲۳-۲۰۲۴ء

کل وقت: ۳ گھنٹے

حصہ "الف" (کثیر الانتخابی سوالات)

- نوٹ: (i) اس حصہ میں ۲۰ جزوی سوالات ہیں۔ تمام سوالات کو جوابات مطلوب ہیں اور پر سوال کا نشان ایک ہے۔
(ii) اس حصہ کے درست جوابات کو OMR شیٹ پر دیئے گئے bubbles (A) (B) (C) (D) کو پر کرنا ہے جو جوابات کی کاپی کے ساتھ مہیا کی گئی ہے۔
(iii) سیاہ یا نیلے بال پوائنٹ پین یا پوائنٹنگ OMR شیٹ کو بھرنے کے لئے استعمال کیجئے۔
(iv) white-o pen اور پینسل کا استعمال OMR شیٹ پر ممنوع ہے۔

(۲۰)

سوال نمبر ۱: درست جواب کا انتخاب کر کے اپنی جوابی کاپی میں لکھیے:

۱. شامل نصاب سبق "فاتے میں روزہ" کے مصنف ہیں:

(A) سر سید احمد خان (B) مولانا الطاف حسین حالی (C) خواجہ حسن نظامی (D) آغا حشر کاشمیری

۲. سبق "زبانِ گویا" کا ماخذ ہے:

(A) کلیاتِ نثر حالی - جلد اول (B) مراۃ العروس (C) آبِ حیات (D) چند ہم عصر

۳. سبق "زیور کا ڈبہ" کے مصنف کا نام ہے:

(A) سر سید احمد خان (B) مولانا الطاف حسین حالی (C) آغا حشر کاشمیری (D) منشی پریم چند

۴. نظم "نوائے سروش" کے شاعر کا نام ہے:

(A) بہادر شاہ ظفر (B) نظیر اکبر آبادی (C) جوش ملیح آبادی (D) احسان دانش

۵. "خواجہ میر درد کا ادبی مقام ہے:

(A) خدائے سخن (B) تصوف کا امام (C) شاعر شباب (D) نجم الدولہ

۶. "مرزا نوشہ" مرزا غالب کی ہے:

(A) قومیت (B) کنیت (C) عرفیت (D) تخلص

۷. "الغرّ والو لثقی" سے مراد ہے:

(A) اُخوت (B) اتحاد (C) تنظیم (D) توحید

۸. ساقی جاوید ان کا قلمی نام ہے:

(A) محمد جاوید (B) پریم چند (C) سید شوکت علی (D) موتی لعل

۹. خوشبو اور صد برگ ان کی تصانیف ہیں:

(A) پروین شاکر (B) نظیر اکبر آبادی (C) جوش ملیح آبادی (D) احسان دانش

۱۰. امتیاز علی تاج کے شامل نصاب سبق کی صنف نثر ہے:

(A) داستان (B) افسانہ (C) ڈرامہ (D) ناول

۱۱. افسانہ زیور کا ڈبہ میں زیور کی مالیت تھی:

(A) چار ہزار روپے (B) پانچ ہزار روپے (C) چھ ہزار روپے (D) سات ہزار روپے

۱۲. رستم اور سہراب کا آپس میں تعلق تھا:

(A) ہم جماعت (B) پڑوسی (C) باپ بیٹا (D) دوست

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COMPREHENSIVE EXAMINATION 2023-24

URDU (COMPULSORY) H.S.C. PART-I (SCIENCE GROUP)

According to the syllabus of the Board of Secondary Education, Karachi



۱۳. اکٹار اور حکایت ان کے قلم کا شاہکار ہیں:
- (A) پروین شاکر (B) رئیس امر وہوی (C) جوش سلیج آبادی (D) احسان دانش
۱۴. نصاب میں شامل حب الوطن رباعی ان کی تخلیق ہے:
- (A) صادق دہلوی (B) رئیس امر وہوی (C) امجد حیدر آبادی (D) میر درد
۱۵. دہلوی تاج دار کے کنبے کا فسانہ اس عنوان سے شامل نصاب ہے:
- (A) زبانِ گویا (B) خواہ مخواہ کی لڑائی (C) فاتحے کا روزہ (D) بیگم کی بلی
۱۶. سبق "مجبوریاں" کا ماخذ ہے:
- (A) بیگمات کے آنسو (B) شہزادی کی بیٹا (C) چھپر کا اعلانِ جنگ (D) پرواز
۱۷. لفظ "علم" کی جمع ہے:
- (A) علوم (B) اعلام (C) آعلم (D) علما
۱۸. رباعی میں مصروں کی تعداد ہوتی ہے:
- (A) تین (B) چار (C) پانچ (D) چھ
۱۹. لفظ آغاز اور انجام میں صنعت ہے:
- (A) مبالغہ (B) تعلیل (C) تضاد (D) تشبیہ
۲۰. احمد فراز کا اصل نام تھا:
- (A) سید احمد شاہ (B) سید طاہر شاہ (C) سید فراز شاہ (D) سید فیروز شاہ

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کل نشانات: ۴۰

حصہ ”ب“ (مختصر جواب کے سوالات)

(۱۰)

سوال نمبر ۲: دیئے گئے اشعار میں سے کسی دو اشعار کی تشریح شاعر کے حوالے اور مختصر تعارف کے ساتھ تحریر کیجئے۔

بیتے ہیں تیرے سائے میں سب شیخ و برہمن
آباد ہے تجھ سے ہی تو گھر دیر و حرم کا
اسی سے دور رہا اصل مدعا جو تھا
گئی یہ عمر عزیز آہ، رائیگاں میری
آغاز کو کون پوچھتا ہے
انجام اچھا ہو آدمی کا
کیا کہیں کتنے مراسم تھے ہمارے اس سے
وہ جو ایک شخص ہے منہ پھیر کے جانے والا
قیدِ حیات و بندِ غم، اصل میں دونوں ایک ہیں
موت سے پہلے آدمی غم سے نجات پائے کیوں

(۱۰)

سوال نمبر ۳: دیئے گئے اقتباسات میں سے کسی ایک کی تشریح مصنف کے حوالے اور مختصر تعارف کے ساتھ تحریر کیجئے۔

(۱) مجھے اس بات کے دیکھنے سے نہایت افسوس ہے کہ ہم سب آپس میں بھائی تو ہیں، مگر مثل برادران یوسف کے ہیں۔ آپس میں دوستی اور محبت، یک دلی اور بچکتی بہت کم ہے۔

(۲) راستی تیرا جو ہے اور آزادی تیرا زیور۔ دیکھ اس جو ہر کو بر باد نہ کر اور اس زیور کو زنگ نہ لگا۔ تو دل کی امین ہے اور روح کی اپنی دیکھ دل کی امانت میں خیانت نہ کر اور روح کے پیغام پر حاشیے نہ چڑھا۔

(۳) شہر چپ چاپ، نہ کہیں پھاوڑا بجاتا ہے، نہ سرنگ لگا کر کوئی مکان اڑایا جاتا ہے، نہ آہنی سڑک آتی ہے، نہ کہیں دمدمہ بنتا ہے۔ دلی شہر خموشاں ہے۔ کاغذ نیڑے گیا اور نہ تمہارے دل کی خوشی کے واسطے ابھی اور لکھتا۔

(۱۰)

سوال نمبر ۴: درج ذیل میں سے کسی ایک نظم کا مرکزی خیال شاعر کے مختصر تعارف کے ساتھ تحریر کیجئے۔

☆ مردِ مسلمان ☆ چُپ کی داد ☆ رہے نام اللہ کا

یا

دیئے گئے بند کی تشریح شاعر اور نظم کے حوالے کے ساتھ تحریر کیجئے۔

بہ جا، بہ جا، کہ اندھیرا ہے شاہ راہوں میں
یہ دور آگ نہیں روشنی ہے منزل کی
جراغِ فکر جہاں تک جلیے، جلائے چلو
قدم ملا کے بڑھو اور علم اٹھائے چلو
سفینہ غرق ہو یا کوئی گھاٹ پر اترے
تمہارا فرض یہ ہے، روشنی دکھائے چلو

(۱۰)

سوال نمبر ۵: درج ذیل میں سے کسی ایک سبق کا خلاصہ اور مصنف کا مختصر تعارف تحریر کیجئے۔

☆ بابانوور ☆ زیور کا ڈبہ ☆ میدان جنگ

یا

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URDU (COMPULSORY) H.S.C. PART-I (SCIENCE GROUP)

According to the syllabus of the Board of Secondary Education, Karachi



مندرجہ ذیل مشقی سوالات میں سے کسی پانچ کے مختصر جوابات تحریر کیجئے:

۱. کس بات سے ظاہر ہوتا ہے کہ ٹھاکر صاحب چند پر کاش پر اعتماد کرتے تھے؟
۲. بابانور ڈاک خانے کے چکر کیوں لگتا تھا؟
۳. سہراب کی موت پر رستم کے جذبات اپنے الفاظ میں بیان کیجئے؟
۴. اقبال کے نزدیک کون کون سے عناصر مسلمان بننے کے لیے ضروری ہیں؟
۵. حالی نے زبان کی طاقت کو نمونہ قدرت الہی کیوں کہا ہے؟
۶. شخصی اور قومی اتفاق میں کیا فرق ہے؟
۷. اسلام نے تفرقہ قومی کو مٹا کر کون سا رشتہ قائم کیا ہے؟
۸. یورپ کے نظریہ قومیت کے بارے میں اقبال کا کیا موقف ہے؟

کل نشانات: ۴۰

حصہ ”ج“ (بیانیہ جواب کے سوالات)

(۲۰)

سوال نمبر ۶: مندرجہ ذیل میں سے کسی ایک شاعر کے کلام کی خصوصیات تحریر کیجئے:

☆ خواجہ میر درد ☆ مرزا غالب ☆ میر تقی میر

(۲۰)

سوال نمبر ۷: مندرجہ ذیل میں سے کسی ایک نثر نگار کے طرز تحریر کی خصوصیات تحریر کیجئے۔

☆ سر سید احمد خان ☆ منشی پریم چند ☆ خواجہ حسن نظامی

-یا-

مندرجہ ذیل میں سے کسی ایک عنوان پر مضمون لکھیے۔

☆ مردم شماری کی اہمیت ☆ ایک ہوں مسلم حرم کی پاسبانی کے لئے

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ISLAMIAT (COMPULSORY) H.S.C. PART-I (SCIENCE GROUP)

According to the syllabus of the Board of Secondary Education, Karachi



کل نشانات: ۵۰

اسلامیات (لازمی) گیارہویں جماعت (سائنس)

کل وقت: ۲ گھنٹے

حصہ "الف" (لازمی) (کثیر الانتخابی سوالات)

نوٹ: (i) اس حصہ میں ۱۰ جزوی سوالات ہیں۔ تمام سوالات کو جوابات مطلوب ہیں اور ہر سوال کا نشان ایک ہے۔
(ii) اس حصہ کے درست جوابات کو OMR شیٹ پر دیئے گئے bubbles (A) (B) (C) (D) کو پر کرنا ہے جو جوابات کی کاپی کے ساتھ مہیا کی گئی ہے۔

(iii) سیاہ یا نیلے بال پوائنٹ پین یا پوائنٹ OMR شیٹ کو بھرنے کے لئے استعمال کیجئے۔

(iv) white-o pen اور پینسل کا استعمال OMR شیٹ پر ممنوع ہے۔

Q. 1: Choose the correct answer for each from the given options: (10)

سوال نمبر ۱: دیئے ہوئے ممکنہ جوابات میں سے ہر ایک کے لئے درست جواب کا

انتخاب کیجئے۔ (۱۰)

1. The kinds of wahi is:

(A) 4 (B) 2 (C) 3 (D) 8

۱۔ وحی کی کتنی قسمیں ہیں۔

2. Legitimate heads of Zakat are:

(A) 4 (B) 12 (C) 8 (D) 10

۲۔ زکوٰۃ کے کل کتنے مصارف ہیں۔

3. Who proposed to arrange the Holy Quran in a book from?

(A) Hazrat Umar (RA) (B) Hazrat Usman (RA)
(C) Hazrat Ali (RA) (D) Hazrat Zaid Bin Sabit (RZ)

۳۔ قرآن کو کتابی شکل میں لانے کی تجویز کس صحابی نے پیش کی۔

(A) حضرت عمرؓ (B) حضرت عثمانؓ

(C) حضرت زید بن ثابتؓ (D) حضرت علیؓ

4. Which was the stage built in Masjid e Nabvi for teaching the Holy Quran?

(A) Darul Uloom (B) Madersa
(C) Darul Quran (D) Suffah

۴۔ مسجد نبوی میں درس قرآن کے لئے جو چوترا بنا یا گیا اس کو کہتے ہیں۔

(A) صفہ (B) مدرسہ (C) دارالقرآن (D) دارالعلوم

5. The literal meaning of Zakat is :

(A) To hide (B) To Purify
(C) To avoid (D) None of them

۵۔ زکوٰۃ کے لغوی معنی ہے۔

(A) بانٹنا (B) پاک کرنا (C) برداشت کرنا (D) نجات پانا

۶۔ سنت کے لفظی معنی ہیں۔

6. The Literal meaning of Sunnah is:

(A) Action (B) Conversation
(C) Bother (D) New thing

(A) طریقہ (B) بات چیت (C) رحمت (D) نئی چیز

۷۔ سب سے افضل جہاد ہے۔

7. Which is the most supreme Jihad?

(A) Jihad Bil Saif (B) Jihad Bil Nafs
(C) Jihad Bil Maal (D) Jihad Bil Qalam

(A) جہاد بالسیف (B) جہاد بالنفس

(C) جہاد بالمال (D) جہاد بالقلم

8. How long it take to reveal the Holy Quran?

(A) 25 Years (B) 23 Years
(C) 24 Years (D) 30 Years

۸۔ قرآن پاک کتنے عرصے میں نازل ہوا۔

(A) ۲۵ سال (B) ۲۴ سال (C) ۲۳ سال (D) ۳۰ سال

9. Surah Al Anfal was Revealed on :

(A) 2 Hijri (B) 3 Hijri (C) 4 Hijri (D) 5 Hijri

۹۔ سورۃ الانفال نازل ہوئی ہے۔

(A) ۲ ہجری (B) ۳ ہجری (C) ۴ ہجری (D) ۵ ہجری

10. Adoption of Taqwa (piety) leads to :

(A) Distinction (B) Power
(C) honor (D) wealth

۱۰۔ تقویٰ اختیار کرنے سے حاصل ہوتی ہے۔

(A) تیز (B) قوت (C) عزت (D) دولت

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According to the syllabus of the Board of Secondary Education, Karachi



کل نشانات: ۳۰

اسلامیات (لازمی) گیارہویں جماعت (سائنس)

کل وقت: ۲ گھنٹے

حصہ "ب" (مختصر جواب کے سوالات)

(۱۲)

سوال نمبر ۲: مندرجہ ذیل قرآنی آیات و احادیث میں سے کسی تین کا ترجمہ و تشریح لکھیے۔

Q2. Translate and explain any three of the following Quranic Verses and Hadiths. (12)

1. الَّذِينَ يُؤْمِنُونَ بِالْغَيْبِ وَيُقِيمُونَ الصَّلَاةَ وَمِمَّا رَزَقْنَاهُمْ يُنْفِقُونَ
2. إِنَّمَا الْمُؤْمِنُونَ الَّذِينَ إِذَا ذُكِرَ اللَّهُ وَجِلَّتْ قُلُوبُهُمْ وَإِذَا لَبِثَ عَلَيْهِمُ اللَّيْلُ زَادَتْهُمْ إِيمَانًا وَعَلَىٰ رَبِّهِمْ يَتَوَكَّلُونَ
3. وَمِنَ النَّاسِ مَن يَقُولُ آمَنَّا بِاللَّهِ وَالْيَوْمِ الْآخِرِ وَمَا هُمْ بِمُؤْمِنِينَ
4. وَأُذِيعُوا كُفْرًا لِلَّهِ أَحَدَى الطَّيِّبِينَ أَنَّهُمْ لَكُمُ وَتَوَدُّونَ أَنَّ غَيْرَ ذَاتِ الشُّوْكَةِ تَكُونُ لَكُمْ وَيُرِيدُ اللَّهُ أَن يُحِقَّ الْحَقَّ بِكَلِمَاتِهِ وَيَقْطَعَ دَابِرَ الْكُفْرَيْنِ
5. لِيُحِقَّ الْحَقَّ وَيُبْطِلَ الْبَاطِلَ وَلَوْ كَرِهَ الْغَافِرُونَ
6. إِنَّمَا الْأَعْمَالُ بِالنِّيَّاتِ. وَإِنَّمَا لِجُلِّ امْرِئٍ مَا نَوَىٰ.
7. لَا يَزَالُ مِنْ أَجْلِكَ حَتَّىٰ يَبْتَغِيَ الْأَخْبِيَةَ مَا يَبْتَغِي لِنَفْسِهِ

Q3. Answer any four questions from the following: (08)

سوال نمبر ۳: مندرجہ ذیل میں سے چار جزوی سوالات کے جوابات تحریر کیجئے۔ تمام سوالات کے نشانات مساوی ہیں۔ (۰۸)

- i. Describe the characteristic name of the Holy Quran.
 - ii. What is the Islamic concept of Hypocrisy? What are the signs of hypocrite?
 - iii. Write down definition & types of Hadith?
 - iv. Define (Wahi) revelation in the light of Holy Quran?
 - v. Write down the types of polytheism?
 - vi. What is meant by the two deaths and two lives of man? mention in the light of Surah Al Baqarah verse no 28.
 - vii. Write down the types of justice.
 - viii. Write down the names of any four famous angles and their duties.
- i. قرآن مجید کے صفاتی نام تحریر کیجئے
 - ii. منافق کا شرعی مفہوم / نشانیاں بیان کریں۔
 - iii. حدیث کی تعریف اور اس کے اقسام لکھیے۔
 - iv. وحی کی تعریف قرآن کی روشنی میں کریں۔
 - v. شرک کی تعریف کریں اور اقسام بیان کریں۔
 - vi. انسان کی دو اموات اور دو زندگیوں سے کیا مراد ہے سورۃ البقرہ کی آیت نمبر ۲۸ کی روشنی میں واضح کیجئے
 - vii. عدل کی اقسام تحریر کیجئے۔
 - viii. چار مشہور فرشتوں کے نام اور ان کے فرائض تحریر کیجئے۔

حصہ (ج) بیانیہ جوابات کے سوالات

Note: Answer any TWO questions from this section. (20)

نوٹ: مندرجہ ذیل سوالات میں سے کسی دو کے جوابات لکھیے۔ (۲۰)

- Q.4 Write down the protection of Holy Quran and its compilation.
- Q.5 Describe the importance of Belief in Risalat (Prophet-Hood) and write the qualities of Prophetic status.
- Q.6 Describe the importance of "NAMAZ" OR "SAUM" and write its benefits
- Q.7 While describing the concept of "Rights of Humans" (Huqooq-ul-ibaad). explain the rights of the "woman".

- سوال نمبر ۴: قرآن مجید کی حفاظت اور تدوین کے ادوار تحریر کیجئے
- سوال نمبر ۵: قرآن و حدیث کی روشنی میں عقیدہ رسالت کی اہمیت بیان کیجئے اور منصب رسالت کی خصوصیات تحریر کیجئے۔
- سوال نمبر ۶: نماز یا روزہ کی اہمیت بیان کیجئے اور اسکے فوائد تحریر کیجئے۔
- سوال نمبر ۷: حقوق العباد کا مفہوم بیان کرتے ہوئے عورتوں کے حقوق بیان کیجئے۔
- یا مندرجہ ذیل اماموں میں سے کسی ایک امام کے حالات زندگی تحریر کیجئے۔

OR Write down the biography of any one Imam of the following.

- i. Hazrat Imam Jafar Sadiq R.A
- ii. Hazrat Imam Azam Abu Hanifa R.A
- iii. Hazrat Imam Shafae R.A.

- i. حضرت امام جعفر صادق رحمۃ اللہ علیہ
- ii. حضرت امام اعظم ابو حنیفہ رحمۃ اللہ علیہ
- iii. حضرت امام شافعی رحمۃ اللہ علیہ

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COMPREHENSIVE EXAMINATION 2023-24

PHYSICS PAPER-H.S.C. PART-I (PRE-ENGINEERING & MEDICAL)

According to the syllabus of the Intermediate Board of Education, Karachi



Time allowed: 20 Minutes

SECTION 'A'

Max. Marks: 17

(MULTIPLE CHOICE QUESTIONS)

- NOTE:**
- This section consists of 17 part questions and all are to be answered. Each question carries 1 mark.
 - The correct answer bubble must be filled on OMR sheet 1) (A) (B) (C) (D) provided with answer script.
 - Use only blue / black ballpoint pen or pointer on OMR sheet.
 - Avoid using pencil / white-o pen on OMR sheet.

Q. 1: Choose the correct answer for each from the given options:

- The angular speed of hour hand of watch for one day is:
(A) $\pi/3600$ rad (B) $\pi/30$ rad (C) $\pi/12$ rad (D) $\pi/24$ rad
- A stone of 2 kg is tied to a 0.50 m long string and swing around a circle at angular velocity of 12 rad/s. The net torque on the stone about the center of the circle is:
(A) 0 Nm (B) 12 Nm (C) 6Nm (D) 72 Nm
- A car is traveling at a constant speed on a straight road. What can you conclude about the net force acting on the car:
(A) The net force is changing (B) The net force is opposite to the direction of motion.
(C) The net force is in the direction of motion. (D) None of the above
- If momentum is increased by 20% then K.E increases by:
(A) 44 % (B) 55 % (C) 66 % (D) 77 %
- If a car accelerates from rest at a rate of 2 m/s². How long does it take to reach a velocity of 10 m/s?
(A) 10 seconds (B) 10 seconds (C) 10 seconds (D) 10 seconds
- One piston in a hydraulic lift has an area that is twice the area of the other. When the pressure at the smaller piston is increased by Δp the pressure at the larger piston:
(A) Increases by $2\Delta p$ (B) Increases by Δp (C) Increases by $\Delta p/2$ (D) Increases by $4\Delta p$
- A bomb of mass 12 kg initially at rest explodes into two pieces of masses 4kg and 8kg. The speed of 8kg mass is 6 m/s. The kinetic energy of 4 kg mass is:
(A) 32J (B) 48J (C) 114J (D) 288J
- According to Bernoulli's Equation, which of the following quantities remains constant along a streamline of fluid flow:
(A) Pressure (B) Velocity (C) Density (D) Volume
- The escape velocity of a planet depends on which of the following factors:
(A) The mass of the planet only (B) The radius of the planet only
(C) Both the mass and the radius of the planet (D) The density of the planet
- The dimension of angular momentum is:
(A) $L^2 M^2 T^2$ (B) $L^2 M^2 T^{-1}$ (C) $L^2 M T$ (D) $L^2 M T^{-1}$
- When $2\mu C$ point charge is located a distance d away from $6\mu C$ point charge, what is the ratio of F_{12}/F_{21} ?
(A) 1/3 (B) 3/2 (C) 1 (D) 1/4
- The velocity of a particle at an instant is 10 m/s and after 5sec the velocity of particle is 20m/s. The velocity 3 sec before in m/s is:
(A) 8 (B) 4 (C) 6 (D) 7
- A potential difference is applied across the ends of a wire. If the potential difference is doubled, then the drift velocity of free electrons will:
(A) Be quadrupled (B) Be doubled (C) Be halved (D) Remain unchanged
- If the mass and speed both are doubled, the kinetic energy of the moving body:
(A) Increases 8 times (B) Increases 4 times (C) Increases 6 Times (D) Remains same
- A spring attached by a load of weight W is vibrating with a period T . If the spring is divided in four equal parts and the same load is suspended from one of these parts, the new time period is:
(A) $T/4$ (B) $2T/4$ (C) $T/2$ (D) $4T$
- If v_a , v_h and v_m are the speeds of sound in air, hydrogen gas, and a metal at the same temperature, then:
(A) $v_a > v_h > v_m$ (B) $v_m > v_h > v_a$ (C) $v_h > v_m > v_a$ (D) $v_h > v_a > v_m$
- Two positive point charges repel each other with a force of $4 \times 10^{-4} N$ when placed at a distance of one meter. If the distance between them is increased by $2m$, the force of repulsion would be:
(A) $2 \times 10^{-4} N$ (B) $1 \times 10^{-4} N$ (C) $8 \times 10^{-4} N$ (D) $16 \times 10^{-4} N$

NORTH NAZIMABAD CAMPUS I	NORTH NAZIMABAD CAMPUS II	GULSHAN	NORTH KARACHI	BAHADURABAD	GULISTAN-E-JOHAR
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ANEES HUSSAIN COACHING CLASSES

EXCELLENCE IN EDUCATION SINCE 1989

COMPREHENSIVE EXAMINATION 2023-24

PHYSICS PAPER-H.S.C. PART-I (PRE-ENGINEERING & MEDICAL)

According to the syllabus of the Intermediate Board of Education, Karachi



Time allowed: 2 hour 40 Minutes

SECTION 'B'

Max. Marks: 68

(SHORT-ANSWER QUESTIONS)

GENERAL INSTRUCTION:

Section 'B': It consists of 14 Short answer questions of which 09 questions are to be answered.

Section 'C': It consists of 3 Descriptive answer questions of which 2 questions are to be answered.

The use of scientific calculator is allowed. All notations are used in their usual meaning. Draw diagram where necessary.

NOTE: Attempt any **NINE** questions from this section.

(36 Marks)

Q. 2:

- i. Light of wavelength 450nm is incident upon diffraction grating on which 5000lines/cm has been ruled.
- (a) How many orders of spectra can be produced on the either side of spectra?
- (b) Determine the angle corresponding to each other.
- OR** Newton's rings are formed by the light of 400nm wavelength. Determine the change in the air film thickness between the third and sixth bright fringe if the radius of curvature of the curved surface is 5.0m what is the radius of curvature of 3rd bright fringe?
- ii. Show that the following formula are dimensionally
- (a) $f = \frac{1}{2L} \sqrt{\frac{T}{\mu}}$ (b) $T = 2\pi \sqrt{\frac{m}{k}}$ (c) $v = f\lambda$ (d) $T = 2\pi \sqrt{\frac{L}{g}}$
- iii. A source of sound and listener are moving towards each other with velocities 0.5 times and 0.2 times to the speed of sound respectively. If the frequency of emitting sound is 2000 Hz, calculate the percentage change in frequency with respect to the listener.
- OR** A uniform string of length 10m and weight 0.25N is attached to the ceiling a weight of 1.0KN hangs from its lower end of the string is suddenly displaced horizontally. How long does it take the resulting wave pulse to travel to upper end?
- iv. A 1500kg car moving on a flat, horizontal road negotiates a curve. If the radius of the curve is 35m and the coefficient of static friction between the tires and dry pavement is 0.523, find the maximum speed the car can have and still make the turn successfully
- OR** A satellite is orbiting the Earth with an orbital speed of 3200 m/s. what is the orbital radius?
- v. How energy is stored in a Capacitor? Derive expression for the energy stored in a capacitor
- OR** Define potential gradient. Show that electric intensity is equal to the negative of potential gradient.
- OR** Derive an expression for the electric field intensity due to a point charge?
- vi. In a game of cricket match a spectator is sitting in the stand at a distance of 60.0m away from the batsman. How long does it take the sound of bat connecting with ball hit for a six to travel to the spectators' ears, if the temperature of air is 27°C.
- OR** A sewing machine needle moves with rapid vibratory motion as it sews a seam. Suppose the needle moves 8.4mm from its highest to its lowest position and it makes 24 stitches in 9.0 sec, what is the maximum needle speed?
- vii. Define centripetal acceleration. Drive the formula $a_c = r\omega^2$
- OR** State and explain Law of Conservation of Angular Momentum
- OR** Describe the setup for the diffraction of X-rays with formula of constructive interference given by Bragg's law
- viii. A mortar shell is fired at a ground level target 500m distance with an initial velocity of 90m/s. what is the launch angles?
- OR** A car starts from rest and moves with constant acceleration. During the 5th second of its motion it cover distance of 30m, find the velocity and distance covered at the instant when time is 3sec.
- ix. Three resistors 1Ω, 2Ω and 3Ω are combined in series. What is the total resistance of the combination? If the combination is connected to a battery of e.m.f 24V and negligible internal resistance, obtain the potential drop across each resistor
- OR** A rectangular boat is 4.0m wide, 8.0m long and 3.0m deep (a) How much water it displaces if the top stays 1m above the water? (b) What load will the boat contain under these conditions if the empty boat weighs 8.6x10⁴N in dry dock?

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EXCELLENCE IN EDUCATION SINCE 1989

COMPREHENSIVE EXAMINATION 2023-24

PHYSICS PAPER-H.S.C. PART-I (PRE-ENGINEERING & MEDICAL)

According to the syllabus of the Intermediate Board of Education, Karachi



- x. A rocket of mass 2kg is launched in air, when it attains height of 15m then 400J of its chemical fuel burns. Find the speed of rocket at maximum height.
OR A motor pumps the water at the rate of 500gm/min to the height of 120m if the motor is 50% efficient the how much input electric power is needed?
- xi. The small piston of hydraulic press has an area of 10 cm². If the applied force is 50N, what must the area of the large piston to exert a pressing force of 4800N?
OR Calculate the viscous drag on a drop of oil of radius 0.1mm falling through air at its terminal velocity. (Viscosity of air = 1.8×10^{-5} Pa .s and density of oil = 850 kg/m³)
OR What area must a heating duct have if air is moving 3.0m/s along it can replenish the air every 15min in a room of volume 300m³, assume air density remains constant.
- xii. Prove that angle of repose is equal to angle of friction.
OR What is meant by orbital velocity derive an expression for the orbital speed of satellite?
- xiii. State and explain Pascal's Law
OR State and explain Kirchhoff's First and Second Law. **OR** Derive an expression for the term power dissipation in resistors
- xiv. A proton and an electron form two corners of an equilateral triangle of side length 2×10^{-6} m. What is the magnitude of the net electric field of these two particles at the third corner?
OR How far must a proton be if the magnitude of electrostatic force acting on the either is equal to the magnitude of gravitational force on a proton at Earth's surface? ($m = 1.67 \times 10^{-27}$ kg and $q = 1.6 \times 10^{-19}$ C)

SECTION 'C'

(DETAILED-ANSWER QUESTIONS)

Note: Attempt any two questions. All questions carry equal marks. Draw diagram where necessary. **Marks: 32**

Q. 3:

- a) Define elastic collision. Two non-rotating spheres of masses m_1 and m_2 initially moving with velocities, u_1 and u_2 respectively in one dimension collide elastically. Derive the expression for their final velocities v_1 and v_2 .
- b) Define conservative field? Show that the Earth's gravitational field is conservative.
OR Discuss the Newton Formula for the speed of sound wave and in what way did the Laplace correct this formula?

Q. 4:

- a) Two forces \vec{F}_1 and \vec{F}_2 are acting on a point making angles θ_1 and θ_2 with positive x-axis respectively. Derive the expression for the magnitude of the resultant force and its direction with respect to the positive x-axis.
OR What is an Electric Dipole? Derive the expression for electric field intensity due to electric dipole at a point which is at a perpendicular distance Y from the center of the dipole.
- b) What are the basic conditions for the interference of light? How did Thomas Young's experimentally confirm the wave nature of light? Derive the expression for fringe spacing:
OR What is projectile motion? A shell is fired with a velocity v_0 at an angle θ_0 with the horizontal to target at the ground level. Derive the expression for:
 (i) Total time of flight (ii) Horizontal range

Q. 5:

- a) A particle is in a state of uniform circular motion, prove that its projection along one of its diameters executes simple harmonic motion.
OR What are stationary waves? Discuss the vibration in a stretched string when it vibrates in
 (i) one loop (ii) two loop (iii) three loop (iv) nth loop
- b) Derive Bernoulli's Equation for steady, non-viscous and incompressible flow of fluid.
OR What are Newton's Rings? Derive the expressions for the radius of dark and bright rings .
OR What is Doppler's Effect? Derive the expression for the frequency detected by stationary listener
 i. When the source moves towards the listener
 ii. When the source moves away from the listener
OR State explains Law of Conservation of Energy and established Work-Energy Equation.

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EXCELLENCE IN EDUCATION SINCE 1989

COMPREHENSIVE EXAMINATION 2023-24

CHEMISTRY H.S.C. PART-I (PRE-ENGINEERING & MEDICAL)

According to the syllabus of the Board of Intermediate Education, Karachi



Time allowed: 20 Minutes

SECTION 'A'

Max. Marks: 17

(MULTIPLE CHOICE QUESTIONS)

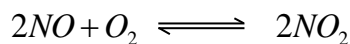
- NOTE:**
- This section consists of 17 part questions and all are to be answered. Each question carries 1 mark.
 - The correct answer bubble must be filled on OMR sheet 1) (A) (B) (C) (D) provided with answer script.
 - Use only blue / black ballpoint pen or pointer on OMR sheet.
 - Avoid using pencil / white-o pen on OMR sheet.

Q. 1: Choose the correct answer for each from the given options:

i) If the electron in a hydrogen atom drops from $n = 6$ to $n = 2$ in which series of lines in the spectrum of atomic hydrogen will the emitted radiation lie?

- (A) Lyman (B) Balmer (C) Paschen (D) Bracket

ii) In Chemical equilibrium we considered the reversible reaction. which one is the unit of K_c .



- (A) Mole/dm³ (B) Mole² dm⁻³ (C) mole⁻²dm⁺⁶ (D) dm³ mol⁻¹

iii) Calorie is equivalent to:

- (A) 0.418J (B) 41.84J (C) 4.184J (D) 418.4J

iv) For $N_2 + 3H_2 \rightleftharpoons 2NH_3$

- (A) $K_c = K_p$ (B) $K_p > K_c$ (C) $K_p < K_c$ (D) None of these

v) A real gas obeys gas laws under the conditions of:

- (A) High temperature and pressure (B) high temperature and low pressure
(C) Low temperature and pressure (D) low temperature and high pressure

vi) Repulsion theory explains the geometry of the covalent compound. Which one of the following have angle 107°.

- (A) NH_3 (B) BF_3 (C) H_2O (D) $MgCl_2$

vii) The overall order of reaction to which the rate law is $R=K$

- (A) Zero order (B) First order (C) Second order (D) Third order

viii) Oxidation state of Cr in $K_2Cr_2O_7$ is:

- (A) 0 (B) +2 (C) -1/2 (D) +6

ix) 11.2 dm³ of oxygen at S.T.P contains _____ molecules.

- (A) 1.2×10^{23} (B) 6.02×10^{23} (C) 3.01×10^{23} (D) 22.4×10^{23}

x) The bond distance between carbon-carbon single bond (C-C) is _____.

- (A) 1.54 \AA (B) 1.34 \AA (C) 1.20 \AA (D) 1.39 \AA

xi) Which is not a colligative property

- (A) lowering in vapour pressure (B) Depression in freezing point
(C) Elevation of boiling point (D) Atmospheric pressure

xii) Strength of sigma bond is highest for

- (A) S-S overlap (B) S-P overlap (C) P-P overlap (D) None

xiii) Crystal systems of substances can be categorized into:

- (A) Five types (B) Seven types (C) Six types (D) Two types

xiv) Which one of the following is an extensive property:

- (A) Melting point (B) Vapour pressure (C) Surface tension (D) Volume

xv) A colloidal solution of liquid into liquid is known as:

- (A) Gel (B) Solution (C) Foam (D) Emulsion

xvi) Galvanized rod of iron is coated with :

- (A) Nickel (B) Zinc (C) Chromium (D) Carbon

xvii) According to Raoult's law the relative lowering of vapour pressure is equal to:

- (A) Mole fraction of solvent (B) Mole fraction of solute
(C) Molality (D) Molarity

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ANEES HUSSAIN COACHING CLASSES

EXCELLENCE IN EDUCATION SINCE 1989

COMPREHENSIVE EXAMINATION 2023-24

CHEMISTRY H.S.C. PART-I (PRE-ENGINEERING & MEDICAL)

According to the syllabus of the Board of Intermediate Education, Karachi



Time allowed: 2 hour 40 Minutes

SECTION 'B'

Max. Marks: 68

(SHORT-ANSWER QUESTIONS)

GENERAL INSTRUCTION:

Section 'B': It consists of 14 Short answer questions of which 09 questions are to be answered.

Section 'C': It consists of 3 Descriptive answer questions of which 2 questions are to be answered.

NOTE: Attempt any nine questions from this section.

(36 Marks)

Q. 2:

- Define the Following:
 - Significant figure
 - Percentage Yield
 - Limiting reactant
 - Molar volume
- (a) Multiply and divide 6.60×10^8 with 3.20×10^3 by using rule of exponential notation.
(b) Automotive antifreeze is 60% (w/w) aqueous solution of ethylene glycol ($C_2H_6O_2$). Determine
(i) Molality of solution (ii) Mole fraction of ethylene glycol in the solution.
- For the reaction $3Mg + N_2 \longrightarrow Mg_3N_2$, 1.5 g of Mg and 1.5 g of nitrogen react together. What is the actual amount of Mg_3N_2 formed and which element is the limiting reactant. Also find the amount of excess reactant.
- State the Raoult's law and derive its three mathematical expression.
- (a) Which Rule or Principle is violated in the following electronic configuration.
(i) $1S^2, 2S^3$ (ii) $1S^2, 2S^2, 2p_x^2, 2p_y^1, 2p_z^0$
(b) Write the electronic configurations of the following:
(i) Cr (z=24) (ii) Ga^{+3} (z=31) (iii) Cu (z=29)
- (a) Calculate the molecular mass of a gas whose rate of diffusion is twice that of CH_4 .
(b) A mixture of 0.2 mole of a gas A & 1.1 g of another gas B (mol. Mass=44) exerts a pressure of 750 torr. Calculate the partial pressure of two gases.
- Derive Ideal Gas Law and write down the value of R in two units.
- Differentiate between the following: (Any 2)
 - Continuous spectrum and line spectrum.
 - Isomorphism and polymorphism
 - Lyman and Balmer series
- Define specific rate constant and Explain the factors affecting rate of chemical reaction (any two).
- At $444^\circ C$ reaction of hydrogen and iodine is performed in a sealed 1 dm^3 steel vessel.
$$H_2 + I_2 \longrightarrow 2HI$$

If equilibrium mixture contains 1 mole of H_2 , 1 mole of I_2 and 7 moles of HI.
Calculate (a) equilibrium constant (b) Initial concentration of H_2 and I_2 .
- Write short note on any 1 of the following:
 - Buffer solution
 - Quantum numbers
 - Dipole moment
 - Plasma
- Define heat of formation. Calculate heat of formation of C_2H_5OH with the help of following data:

$* 2C + 3H_2 + \frac{1}{2} O_2 \longrightarrow C_2H_5OH$	$\Delta H = ?$
$* C + O_2 \longrightarrow CO_2$	$\Delta H = -394 \text{ K. J/mol}$
$* H_2 + \frac{1}{2} O_2 \longrightarrow H_2O$	$\Delta H = -286 \text{ K. J/mol}$
$* C_2H_5OH + 3O_2 \longrightarrow 2CO_2 + 3H_2O$	$\Delta H = -1369 \text{ K.J/mol}$
- State first law of thermodynamics. Derive pressure volume work equation.
OR The given chemical reaction is $PbI_2 \longrightarrow Pb^{+2} + 2I^{-1}$ At $25^\circ C$ the solubility of $PbI_2 = 0.63 \times 10^{-3}$ mole/ dm^3 . Find the value of K_{sp} and express its unit.
- Discuss the effect of change in concentration, pressure and temperature on Haber's process on the basis of Le-Chatelier's principle.
OR Define the following:
 - Standard Hydrogen Electrode
 - enthalpy
 - Redox reaction
 - Internal energy

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EXCELLENCE IN EDUCATION SINCE 1989

COMPREHENSIVE EXAMINATION 2023-24

CHEMISTRY H.S.C. PART-I (PRE-ENGINEERING & MEDICAL)

According to the syllabus of the Board of Intermediate Education, Karachi



SECTION 'C'

(DETAILED-ANSWER QUESTIONS)

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

Marks: 32

Q. 3:

- a) Define standard electrode potential. Explain the determination of standard electrode copper with diagram and potential of cell reactions.
- b) Give four properties of ionic solids. How can you determine the number of Na^+ and Cl^- ions in a unit cell of sodium chloride.
- OR** Discuss the shapes of H_2O & NH_3 on the basis of HOM & EPRT. Also discuss the hybridization in Ethane molecule.

Q. 4:

- a) Discuss the defects of Bohr's Atomic Theory & derive the expression for the energy of Hydrogen atom. ($r = \frac{\epsilon_0 n^2 h^2}{z\pi m e^2}$)
- b) Balance the following equations by ions-electron method.
- i) $\text{Cr}_2\text{O}_7^{2-} + \text{H}^+ + \text{I}_2 \longrightarrow \text{Cr}^{+3} + \text{IO}_3^- + \text{H}_2\text{O}$ (Acidic)
- ii) $\text{MnO}_4^- + \text{SO}_3^{2-} + \text{OH}^- \longrightarrow \text{Mn}^{+2} + \text{SO}_4^{2-}$ (Basic)

Q. 5:

- a) Use the data provided below for the formation of $\text{RbCl}_{(s)}$, write thermochemical equations for all steps involved in the Born Haber's cycle and determine the enthalpy of formation of $\text{RbCl}_{(s)}$.

Sublimation energy of $\text{Rb}_{(s)}$ = 82KJ/mol

Ionization energy of $\text{Rb}_{(g)}$ = 403KJ/mol

Dissociation energy of $\text{Cl}_{2(g)}$ = 242KJ/mol

Electron affinity of $\text{Cl}_{(g)}$ = -348.5KJ/mol

Lattice energy of RbCl = -689KJ/mol

- b) What is an ideal gas? How will you derive the Vander Waal's equation keeping in view the general or ideal gas equation ($PV=nRT$) **OR** Explain Hess's law of enthalpy summation along with its example & two application.

(Atomic Masses: H=1 a.m.u, C=12 a.m.u, N=14 a.m.u, O= 16 a.m.u, Na=23 a.m.u, Pb=208 a.m.u, I=127 a.m.u, Mg=24 a.m.u)

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EXCELLENCE IN EDUCATION SINCE 1989

COMPREHENSIVE EXAMINATION 2023-2024

COMPUTER STUDIES PAPER-HSC PART-I (SCIENCE GROUP)

According to the syllabus of the Intermediate Board of Education, Karachi



TIME: 15 MINUTES

SECTION 'A'

MAX. MARKS: 15

(MULTIPLE CHOICE QUESTIONS)

- NOTE:**
- This section consists of 15 part questions and all are to be answered. Each question carries 1 mark.
 - The correct answer bubble must be filled on OMR sheet 1) (A) (B) (C) (D) provided with answer script.
 - Use only blue / black ballpoint pen or pointer on OMR sheet.
 - Avoid using pencil / white-o pen on OMR sheet.

Q. 1: Choose the correct answer for each from the given options:

- Which of the following is not a search Engine ?**
(A) Bing (B) google (C) yahoo (D) windows
- Which of the following is not a valid zoom percentage in Excel ?**
(A) 100 (B) 300 (C) 500 (D) 50
- It is the activity of moving quickly upward or downward through the text;**
(A) moving (B) scrolling (C) browsing (D) none of these
- When you create a new document it exist only in computer :**
(A) system (B) RAM (C) ROM (D) all of these
- The number of instructions executed by a computer depends upon the size of:**
(A) Opcode (B) Decoder (C) MBR (D) MAR
- What type of computer has been traditionally used by individual scientists and engineers as a tool for drafting, design and map making?**
(A) Micro computer (B) mini computer (C) mainframes (D) super computer
- The process of converting from analogue to digital and vice versa is called:**
(A) Modulation (B) line switching (C) Modem (D) demodulation
- The birth of the world wide web took place at:**
(A) Rand corporation (B) ARPA (C) CERN (D) Microsoft
- The produce high quality graphics in color one would like to use:**
(A) plotter (B) inkjet printer (C) laser printer (D) all of the these
- Web document is also a**
(A) web page (B) website (C) web store (D) none of the above
- In the maximum font size you can apply for any character**
(A) 163 (B) 16308 (C) 1638 (D) 163080
- Encryption is a type of technique to avoid:**
(A) Virus (B) firewall (C) both (D) none
- At which layers OSI packets are converted into frames?**
(A) Network (B) Session (C) Data link (D) Physical
- Software allows the user to send email and faxes:**
(A) database (B) graphics (C) communication (D) none
- The last part of email is called :**
(A) First (B) Last name (C) Domain name (D) None

NORTH NAZIMABAD CAMPUS I	NORTH NAZIMABAD CAMPUS II	GULSHAN	NORTH KARACHI	BAHADURABAD	GULISTAN-E-JOHAR
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ANEES HUSSAIN COACHING CLASSES

EXCELLENCE IN EDUCATION SINCE 1989

COMPREHENSIVE EXAMINATION 2023-2024

COMPUTER STUDIES PAPER-HSC PART-I (SCIENCE GROUP)

According to the syllabus of the Intermediate Board of Education, Karachi



TIME: 2 HOURS 45 MINUTES

SECTION 'B'

MAX. MARKS: 60

(SHORT-ANSWER QUESTIONS)

Note: Attempt any Ten (10) part questions from this Section, All questions carry equal marks.

Marks: 30

Q. 2:

- i. Describe the mechanism of a Hard disk.
OR Difference between keyboard and mouse.
- ii. What do you know about productivity software?
- iii. What would be the negative impacts of CHATGPT in education? Explain in your own words.
- iv. Define terminal with its different types.
- v. Define the following memory units:
* BIT * BYTE * NIBBLE
OR Write any two upcoming and shortcoming of computer system.
- vi. Explain peer to peer LAN's model.
- vii. Describe any three LAN'S component.
- viii. Difference between internet, extranet, intranet.
- ix. What is meant by 'text entry device' ? explain.
- x. Make a list of different types of resolution of a monitor.
OR Define Encryption and decryption of data.
- xi. Difference between CLI and GUI.
OR Define RAM and name its basic types.
- xii. What is the role of computer in business and Medical field?
OR Define Asynchronous transmission mode with relevant diagram.
- xiii. What are the benefits of Ring and Bus topology? Explain with diagram.
- xiv. What do you know about address memory location?
OR Define computer antivirus software. With any three popular antivirus software.
- xv. Write some functions of spread sheet that is not perform by word processor.
OR Write any three properties of internet browsing.

SECTION 'C'

(DETAILED-ANSWER QUESTIONS)

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

Marks: 30

- Q3. Describe different types of communication medium with the help of appropriate examples in detail.
- Q4. Describe transmission modes with diagram and one daily life example. Also explain some main features of an operating system.
- Q5. Draw OSI model layer diagram and define the steps and working of each layer.
OR Define authentication mechanism with its different common mechanism in detail.
- Q6. Define printer with its major types in detail.
- Q7. Define computer network. Also describe different types of network used in different fields.

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ANEES HUSSAIN COACHING CLASSES

EXCELLENCE IN EDUCATION SINCE 1989



COMPREHENSIVE EXAMINATION 2023-24 MATHEMATICS PAPER-HSC PART-I (PRE-ENGINEERING)

According to the syllabus of the Board of Intermediate Education, Karachi

Time: 20 Minutes

SECTION 'A'

Max. Marks: 20

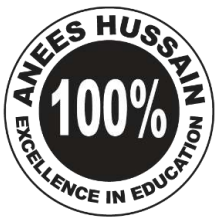
(MULTIPLE CHOICE QUESTIONS)

- NOTE:**
- This section consists of 20 part questions and all are to be answered. Each question carries 1 mark.
 - The correct answer bubble must be filled on OMR sheet 1) (A) (B) (C) (D) provided with answer script.
 - Use only blue / black ballpoint pen or pointer on OMR sheet.
 - Avoid using pencil / white-o pen on OMR sheet.

Q. 1: Choose the correct answer for each from the given options:

- $\left(i + \frac{1}{i}\right)^{100} = \underline{\hspace{2cm}}$ where $i = \sqrt{-1}$
(A) 200 (B) 0 (C) -1 (D) 100
- If $|x + 5i| = 3$, then x is equal to:
(A) ± 4 (B) $\pm 4i$ (C) $\pm 22i$ (D) None of these
- If $(\vec{A})^t + A = \mathbf{0}$, then matrix A is:
(A) Symmetric Matrix (B) Hermitian matrix (C) Nilpotent matrix (D) Skew Hermitian matrix
- If the matrix $\begin{bmatrix} 5 & 2 & 1 \\ g-3 & -1 & 4 \\ f+1 & 2-h & 7 \end{bmatrix}$ is upper Triangular then: = ____
(A) $f=2, g=5, h=4$ (B) $f=g=0, h=-2$ (C) $f=-1, g=3, h=2$ (D) $f=4, g=2, h=-5$
- If $|\vec{a} \times \vec{b}| = \vec{a} \cdot \vec{b}$ then angle between \vec{a} and \vec{b} is:
(A) 0 (B) $\frac{\pi}{2}$ (C) $\frac{\pi}{4}$ (D) $\frac{\pi}{3}$
- Direction cosines of the vector $\hat{i} + \hat{j} - \hat{k}$ are:
(A) $\left(\frac{1}{\sqrt{3}}, -\frac{1}{\sqrt{3}}, \frac{1}{\sqrt{3}}\right)$ (B) $\left(-\frac{1}{\sqrt{3}}, \frac{1}{\sqrt{3}}, \frac{1}{\sqrt{3}}\right)$ (C) (1, 1, -1) (D) $\left(\frac{1}{\sqrt{3}}, \frac{1}{\sqrt{3}}, -\frac{1}{\sqrt{3}}\right)$
- If $\frac{a-b}{b-c} = \frac{a}{b}$ then a, b, c are in:
(A) A.P (B) G.P (C) H.P (D) Both A.P and H.P
- If $a_n - a_{n-1} = n + 1$ and $a_4 = 14$, then $a_5 = ?$
(A) 3 (B) 5 (C) 14 (D) 20
- The sum of last 12 terms of series $1 + 2 + 3 + \dots + 39$ is:
(A) 501 (B) 400 (C) 601 (D) 402
- The number of ways that a necklace of 50 beads of different colours be made is:
(A) 50! (B) $\frac{49!}{2}$ (C) 49! (D) $\frac{1}{2} 50!$
- If ${}^{12}C_r = {}^{12}C_{r+4}$ then ${}^6C_r = \underline{\hspace{2cm}}$:
(A) 20 (B) 10 (C) 12 (D) 15
- If $|x| < 1$ then $1 + 3x + 6x^2 + 10x^3 + \dots$ is equal to:
(A) $(1-x)^{-1}$ (B) $(1+x)^{-3}$ (C) $(1-x)^{-2}$ (D) $(1-x)^{-3}$
- In $\left(x + \frac{1}{x}\right)^9$ the sum of the binomial coefficients is equal to:
(A) 64 (B) 128 (C) 512 (D) 256
- Domain of the function $f(x) = \frac{3x+1}{x-1}$ is set of all:
(A) Real numbers (B) rational numbers (C) complex number (D) real numbers, except 1
- A function which is to be maximized or minimized is called:
(A) Linear function (B) equal function (C) objective function (D) Non linear function
- $\frac{\sec 35^\circ}{\operatorname{cosec} 55^\circ} + \frac{\sin 48^\circ}{\cos 42^\circ} = \underline{\hspace{2cm}}$
(A) 0 (B) -1 (C) $\frac{1}{2}$ (D) 2
- $\sin \theta = \underline{\hspace{2cm}}$
(A) $\frac{2 \tan \theta}{\cos \theta}$ (B) $1 + \cos \theta$ (C) $2 \sin \frac{\theta}{2} \cos \frac{\theta}{2}$ (D) $\frac{1 + \cos 2\theta}{2}$
- In any triangle ABC $(a - b + c)$ is equal to:
(A) 2S (B) $\frac{S}{(s-b)}$ (C) $\frac{R}{s}$ (D) 2(S-b)
- Period of $-\frac{2}{5} \sec \frac{3x}{\pi}$ is:
(A) 2π (B) π (C) $\frac{2\pi}{3}$ (D) $\frac{2\pi^2}{3}$
- $\sec \left[\sin^{-1} \left(-\frac{1}{2} \right) \right] = \underline{\hspace{2cm}}$
(A) $\frac{2}{\sqrt{3}}$ (B) $\frac{\sqrt{3}}{2}$ (C) $\frac{1}{2}$ (D) $-\frac{2}{\sqrt{3}}$

NORTH NAZIMABAD CAMPUS I	NORTH NAZIMABAD CAMPUS II	GULSHAN	NORTH KARACHI	BAHADURABAD	GULISTAN-E-JOHAR
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ANEES HUSSAIN COACHING CLASSES

EXCELLENCE IN EDUCATION SINCE 1989

COMPREHENSIVE EXAMINATION 2023-24

MATHEMATICS PAPER-HSC PART-I (PRE-ENGINEERING)

According to the syllabus of the Board of Intermediate Education, Karachi



Time: 2 Hour 40 Minutes

Max. Marks: 80

SECTION 'B' (SHORT-ANSWER QUESTIONS)

Note: Attempt any ten questions from this section. All questions carry equal marks. Marks: 40

Q.2:

- i) Find the real and imaginary parts of $\left(\frac{3+4i}{5i-4}\right)^{-2}$
 OR Solve the complex equation $x^2 - 7x + 9iy = iy^2 + 20i - 12$ OR $(x + 3i)^2 = 2yi$

- ii) Find the index of nilpotent matrix $\begin{bmatrix} 0 & 1 & 0 \\ 0 & 0 & 1 \\ 0 & 0 & 0 \end{bmatrix}$
 OR Find the period of periodic matrix $\begin{bmatrix} 1 & -2 & -6 \\ -3 & 2 & 9 \\ 2 & 0 & -3 \end{bmatrix}$

- iii) If a, b, c are different and $\Delta = \begin{vmatrix} a & a^2 & 1+a^3 \\ b & b^2 & 1+b^3 \\ c & c^2 & 1+c^3 \end{vmatrix} = 0$ then show that $1 + abc = 0$

OR By using properties of derterminants prove that $\begin{vmatrix} 1+a & 1 & 1 \\ 1 & 1+b & 1 \\ 1 & 1 & 1+c \end{vmatrix} = abc \left(1 + \frac{1}{a} + \frac{1}{b} + \frac{1}{c}\right)$

- iv) Find the work done by the force $\vec{F} = 7\hat{i} + 9\hat{j} - 11\hat{k}$ in moving an object along a straight line from (4, 2, 7) to (6, 4, 9).

OR Find a unit vecto which is orthogonal to both the vectors $\vec{a} = \hat{i} - 2\hat{j} + 3\hat{k}$ and $\vec{b} = 3\hat{i} - 2\hat{j} + \hat{k}$

- v) For what value of n if $\frac{a^{n-2}+b^{n-2}}{a^{n-3}+b^{n-3}}$ is the G.M between a and b?

OR If the pth term of an H.P is q and qth term is p, prove that the (p + q)th term is $\frac{pq}{p+q}$

- vi) Sum the series upto n terms:

$2 + (2 + 5) + (2 + 5 + 8) + \dots$ upto n terms OR $2^2 + 4^2 + 6^2 + 8^2 + \dots$ Upto n terms OR $1 + 9a + 17a^2 + 25a^3 + \dots$ infinity where $|a| < 1$.

- vii) How many distict permutations of letter of the word 'ESSENTIAL' are possible? How many will have the two (S) i) together ii) separate

OR The members of a club are 12 boys and 8 girls. In how many ways i) a committee of 5 members be formed ii) a committee of 4 boys and 3 girls be formed.

OR How many words can be formed by 3 vowels and 4 consonants out of 5 vowels and 7 consonants?

- viii) Prove the following proposition by mathematical induction for natural number n

$$1 + \frac{1}{2} + \frac{1}{4} + \dots + \frac{1}{2^{n-1}} = 2 \left(1 - \frac{1}{2^n}\right)$$

OR $2^2 + 4^2 + 6^2 + \dots + (2n)^2 = \frac{2}{3}n(n+1)(2n+1)$

OR Prove the following statement by mathematical induction $2^{3n+2} - 28n - 4$ is divisible by $49 \forall n \in \mathbb{N}$

- ix) Obtain in the simplified form the term involving x^6 in the expansion of $\left(2x^3 - \frac{1}{x^2}\right)^7$

OR Find the middle term of $\left(\frac{a}{b} - \frac{b}{a}\right)^{18}$

- x) Find the inverse of ht e fuanction $f(x) = \frac{5}{9}(x - 32)$ and verify that $f^{-1}[f(x)] = x$.

OR A function is defined by $f(x) = ax + b$ the images of 1 and 5 are -2 and 10 respectively.

i) Find the vau of a and b.

ii) The domain of $f = \{1, 3, 5\}$, find the range of f ?

- xi) Find the equation of the function of the type $y = f(x) = ax^2 + bx + c$ which cuts the x-axis at the points (-4, 0) and (3, 0) and also passes through the point (2, -4)?

OR The paths of two aeroplanes A and B in the plane are determined by the straight lines $2x - y = 6$ and $3x + y = 4$ respectively. Graphically find the point where the two paths cross each other.

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COMPREHENSIVE EXAMINATION 2023-24

MATHEMATICS PAPER-HSC PART-I (PRE-ENGINEERING)

According to the syllabus of the Board of Intermediate Education, Karachi

- xii) If $A + B + C = 180^\circ$ then prove that $\tan \frac{A}{2} \tan \frac{B}{2} + \tan \frac{B}{2} \tan \frac{C}{2} + \tan \frac{C}{2} \tan \frac{A}{2} = 1$
 OR If $\sin \alpha = \frac{12}{13}$ and $\sin \beta = \frac{3}{5}$ where $0 < \alpha < \frac{\pi}{2}$ and $0 < \beta < \frac{\pi}{2}$ then find $\cos(\alpha - \beta) = ?$
- xiii) A piece of plastic strip 1 meter long is bent to form an isosceles triangle with 95° as measures of its largest angle. Find the length of the sides.
 OR The area of triangle is 3.346 sq.unit. If $\beta = 20.9^\circ$, $\gamma = 117.2^\circ$. Find α and side a?
- xiv) Prove that $\frac{1}{r^2} + \frac{1}{r_1^2} + \frac{1}{r_2^2} + \frac{1}{r_3^2} = \frac{a^2+b^2+c^2}{\Delta^2}$
 OR If $a = b = c$ then prove that $r_1 : R : r = 3 : 2 : 1$
- xv) Draw the graph of $y = -\sin x$ where $0 \leq x \leq 2\pi$
 OR By using graph find the solution of the equation $\sin x - \frac{2x}{\pi} = 0$ where $-\frac{\pi}{2} \leq x \leq \frac{\pi}{2}$
 OR Show that $\sec^{-1}\left(\frac{\sqrt{5}}{2}\right) + \cot^{-1}(3) = \frac{\pi}{4}$

SECTION 'C'

(DETAILED-ANSWER QUESTIONS)

Note: Attempt any **five** questions from this section. All questions carry equal marks. Marks: 40

Q.3 Use Gauss elimination method OR Gauss-Jordan method, solve the following system of linear equation.

$$x + 2y + z = 8 \qquad 2x - y + z = 3 \qquad x + y - z = 0$$

Q.4 If G.M and H.M between the two numbers are 15 and $\frac{75}{13}$ respectively, find the numbers.

OR The A.M of two positive integral numbers exceeds their positive G.M by 2 and their sum is 20, find the numbers.

OR Find the sum of first hundred natural numbers which are neither exactly divisible by 3 nor by 7.

Q.5 If the probability of solving a problem by two students Ahsan and Umar are $\frac{1}{2}$ and $\frac{1}{3}$ respectively then what is the probability of the problem to be solved?

OR A card drawn from well shuffled deck of cards, find the probability of:

- i) getting a face card ii) (9) of black color iii) getting a jack iv) getting a heart

OR A pair of fair dice is thrown, If the two numbers appearing are different, find the probability that i) the sum is 10 ii) the sum is six or less.

Q.6 If $\frac{1}{x} = \frac{2}{5} + \frac{1.3}{2!} \left(\frac{2}{5}\right)^2 + \frac{1.3.5}{3!} \left(\frac{2}{5}\right)^3 + \dots$, then show that $4x^2 - 2x - 1 = 0$

OR If $y = 3x + 6x^2 + 10x^3 + \dots$ then prove that $x = \frac{y}{3} - \frac{1.4}{3^2.2!}y^2 + \frac{1.4.7}{3^2.3!}y^3 + \dots$

Q.7 Prove any two of the following:

i) $\frac{\sin(\theta+\phi) - 2\sin\theta + \sin(\theta-\phi)}{\cos(\theta+\phi) - 2\cos\theta + \cos(\theta-\phi)} = \tan\theta$

ii) $\tan 4\theta = \frac{4\tan\theta(1-\tan^2\theta)}{\tan^4\theta - 6\tan^2\theta + 1}$

iii) $\sin 20^\circ \sin 40^\circ \sin 60^\circ \sin 80^\circ = \frac{3}{16}$

OR Derive fundamental law.

Q.8 A, B, C are the points \vec{a} , \vec{b} and $2\vec{a} - \vec{b}$ respectively. D divides \vec{AC} in 2:3 and E divides \vec{BD} in 4:1. Find the position vector of E.

OR In a parallelogram ABCD, X is the midpoint of \vec{AB} and y divides \vec{BC} in 1 : 2 show that if z divides \vec{DX} in 6 : 1, then it also divides \vec{AY} in 3:4.

OR Find the volume of tetrahedron whose vertices are A(2, 1, 7), B (5, -1, 3), C (4, 3, 5) and D (0, 2, 3)

Q.9 Solve the following linear programming problem by graphical method when $x \geq 0, y \geq 0$
 Maximize $z = 4x + y$ subject to $x + y \leq 50, 3x + y \leq 90, x - y \leq 40$. Also find feasible region and its corner points.

Q.10 Find the general solution of the trigonometric equation $(\operatorname{cosec} x + 2) \cdot (2\cos x - 1) = 0$ OR

$\cos \theta + \cos 3\theta + \cos 5\theta = 0$ OR $3\tan^2 x + 2\sqrt{3}\tan x + 1 = 0$

And verify the solution.

NORTH NAZIMABAD CAMPUS I	NORTH NAZIMABAD CAMPUS II	GULSHAN	NORTH KARACHI	BAHADURABAD	GULISTAN-E-JOHAR
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COMPREHENSIVE EXAMINATION 2023-24

BIOLOGY PAPER-HSC-I (SCIENCE PRE-MEDICAL GROUP)

According to the syllabus of the Board of Intermediate Education, Karachi

Time: 20 minutes

Max. Marks: 08

ZOOLOGY (THEORY)

SECTION 'A'

(MULTIPLE CHOICE QUESTIONS)

- NOTE:**
- This section consists of 16 part questions and all are to be answered. Each question carries ½ mark.
 - The correct answer bubble must be filled on OMR sheet 1) (A) (B) (C) (D) provided with answer script.
 - Use only blue / black ballpoint pen or pointer on OMR sheet.
 - Avoid using pencil / white-o pen on OMR sheet.

Q No 01: Select the most appropriate answer for each from the given options:

- _____ Site of enzyme help to perform the chemical action on substrate.
A) Catalytic B) Binding C) Allosteric D) All of these
- Which of the following are known as Police of the body?
A) RBC's B) WBC's C) Plasma D) None
- Maximum O₂ is transported in the body through _____
A) Plasma B) WBC's C) RBC's D) All of these
- Bile juice contain _____ enzymes
A) Trypsin B) Lipase C) Secretin D) None
- Star fish belongs to _____
A) Dipnoi B) Echinodermata C) Platyhelminthes D) Cnideria
- QRS complex in ECG represent
A) Atrials systole B) Ventricular Diastole C) Ventricular Systole D) None
- Heartbeat duration is _____
A) 8sec B) 0.5sec C) 72sec D) 0.8sec
- Human heart shows _____ type of circuit.
A) Single circuit B) incomplete double circuit
C) complete Double circuit D) None
- Human Heart receive the Deoxygenated blood from Body through _____
A) Vana-cava B) pulmonary vein C) pulmonary artery D) artery
- Enzymes are _____ type of Proteins
A) Fibrous B) Globular C) Both D) None
- Which of the following is known as flying mammal?
A) Spiny ant eater B) parrot C) bat D) sparrow
- Immunity that develop after disease is _____
A) Natural Passive B) Artificial Active C) Natural Active D) Vaccination
- Glucose + Glucose = _____
A) Sucrose B) Fructose C) Maltose D) Lactose
- Hemoglobin has _____ type of protein structure.
A) Primary B) Secondary C) Tertiary D) Quaternary
- Which one of the following includes in Amniotes
A) Mammals B) birds C) reptiles D) All of them
- Tidal Volume of Human Lungs _____
A) 5000ml B) 500lit C) 50ml D) 500ml

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COMPREHENSIVE EXAMINATION 2023-24

BIOLOGY PAPER-HSC-I (SCIENCE PRE-MEDICAL GROUP)

According to the syllabus of the Board of Intermediate Education, Karachi

Time: 1 hour 40 minutes

Max. Marks: 32

ZOOLOGY (THEORY)

SECTION 'B'

(SHORT-ANSWER QUESTIONS)

Note: Attempt EIGHT (08) part questions in all. Select FOUR (04) from REASONING question and FOUR (04) from NON-REASONING questions. Marks: 16

Q. 2 (a): Reasoning Questions

- How food travel along the entire length of G.I.T?
OR How Liver Act as Metabolic factory?
- Why do the walls of Trachea do not collapse when there is less air in it?
OR why breathing rate increases during exercise?
- Why Lub and Dup sound produce in heart beat?
OR Why do walls of stomach do not damage by Hcl?
- Why do RBC begin to burst when placed in distilled water?
OR why we should not take bath after meal?
- How Arthropods increase their body size?
OR Why we need Oxygen for body?
- Why Systolic pressure is more than Diastolic? Why Oil do not dissolve in water?
OR Why running bird cannot fly?
- If you once have Chicken pox in life you will never have this disease again in life, why?
OR Why glyco lipids are called cerebroside?

Q. 2 (b): Non-Reasoning Questions

- Describe Thrombus and hypertension.
OR Classify Enzymes on the basis of Chemical Reactions.
- Describe Lungs Volume and capacities along with types.
- Describe any one Disease (Allergy/ Sinusitis /Autoimmune-disorder).
OR Describe Structure of DNA.
- Describe Characteristics of Respiratory surface.
OR Differentiate between Active and Passive immunity.
- Discuss Types of Vascular Pathways.
OR Describe Role of Vasodilatation and Vasoconstriction in Blood pressure.
- Differentiate between Single circuit and Double circuit.
OR Complete and incomplete Circulation.
- Describe Role of Pre-capillaries Sphincter in Blood flow.
OR Describe inhibitors and its types.

SECTION 'C'

(DETAILED-ANSWER QUESTIONS)

Note: Attempt any TWO questions from this part. All questions carry equal marks. Marks: 16

- Q.3 Describe in detail Structure of Human heart along with labeled diagram. OR CVDs in detail.
OR Write a detailed note on lymphatic system.
- Q.4 Describe in detail the Human Respiratory system with labeled diagram.
OR Describe in detail Adaptive immunity along with 3rd line of Defense.
- Q.5 Describe in detail with labeled diagram, Digestive system of Man (from stomach till ileum).
OR Describe in detail salient features and characteristics of Phylum Annelida OR Mollusca OR Arthropoda.

NORTH NAZIMABAD CAMPUS I	NORTH NAZIMABAD CAMPUS II	GULSHAN	NORTH KARACHI	BAHADURABAD	GULISTAN-E-JOHAR
C-17 Block I, 5 Star Chowranghi, near Imam Clinic, North Nazimabad, Karachi. 021-36631160/36634284 0321-2333114	2nd Floor Saima Paari View, B-pp Block H, North Nazimabad, near Danis Snacks 021-36641888/36641888 0333-2867446-7	E4, 1 st Floor, Maqbool Heights, Main NIPA Chowranghi, Above Mobile World, Block-10, Gulshan-e-Iqbal, Karachi 021-34989588/34993726 34993996/ 0321-9289588	A-985, 2nd Floor, Sector 11-B, main U.P More bus stop, North Karachi, Karachi 021-36932266/0311-2299282 0322-2685558	Mezzanine Floor, Alamgir Rd, near Subway Snacks & Sharfabad Chowranghi, Karachi 021-34943939/ 34921180 0303-2267893	1 st Floor, Sarah Grands, Plot No. SB-29, Gulistan-e-Johar, Block 7, Main University Road, Near Safora Chowranghi, Karachi 021-34661002/34661003 0332-4977706



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BIOLOGY PAPER-HSC-I (SCIENCE PRE-MEDICAL GROUP)

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Time: 20 minutes

BOTANY (THEORY)

Max. Marks: 09

SECTION 'A'

(MULTIPLE CHOICE QUESTIONS)

- NOTE:**
- This section consists of 18 part questions and all are to be answered. Each question carries ½ mark.
 - The correct answer bubble must be filled on OMR sheet 1) (A) (B) (C) (D) provided with answer script.
 - Use only blue / black ballpoint pen or pointer on OMR sheet.
 - Avoid using pencil / white-o pen on OMR sheet.

Q. 1: Choose the most appropriate answer for each from the given options:

- Guttation occur through :**
(A) Lenticels (B) Hydathodes (C) Stomata (D) Bark
- The fusion of nuclei called :**
(A) Karyogamy (B) Samatogamy (C) Plasmogamy (D) Isogamy
- Absorptive heterotrophic nutrition is exhibited by**
(A) Fungi (B) Algae (C) Pteridophytes (D) Bryophytes
- Intercalary meristem results in :**
(A) Primary growth (B) Secondary growth (C) Apical growth (D) None
- The light reaction takes place on/in:**
(A) Thylakoid (B) Stroma (C) Chloroplast (D) Grana
- Which one of the following is not an energy releasing process?**
(A) Glycolysis (B) Respiration (C) Photosynthesis (D) Krebs cycle
- A typical structure of obligate parasite, specialized for fixation and absorption**
(A) Flagella (B) Pilli (C) Haustoria (D) Root hairs
- Clarity of image is generally known as**
(A) Magnification (B) Contrast (C) Resolution (D) Sedimentation
- The most important cellulose degraders in eco system are**
(A) Ascomycota (B) Zygomycota (C) Basidiomycota (D) Deutromucota
- Subdivision of tracheophyta which does not contain true roots and leaves**
(A) Lycopsida (B) Psilopsida (C) Pteropsida (D) Sphenopsida
- Which process involved in the promotion of flowering by cold treatment**
(A) Photoperiodism (B) Vernalization (C) Secondary growth (D) Transpiration
- Plant oxidizes sugar in chloroplast during daytime without production of energy called**
(A) C4 cycle (B) Photorespiration (C) C3 cycle (D) Photophosphorylation
- Some structure are smaller than virus having single stranded RNA with some double stranded regions called**
(A) Viroid's (B) Prions (C) Minus strand virus (D) Double stranded DNS virus
- Anaerobic bacteria produce all chemicals during respiration except**
(A) Ethanol (B) CO₂ (C) Water (D) Lactic acid
- An enzyme which can convert single-stranded RNA into double stranded viral DNA is called**
(A) DNAase (B) RNAase (C) DNA (D) Reverse transcriptase
- Many bacteria contain additional molecules which are very helpful in modern genetic engineering techniques; they are circular and self-replicating and called as:**
(A) Ribosomes (B) Spores (C) Plasmids (D) Mesosome
- The parasitic fungus which destroys wheat plant is**
(A) Lice (B) Leech (C) Cuscuta (D) Puccinia
- The hydrostatic pressure in excess of atmospheric pressure is known as :**
(A) Water potential (B) Pressure potential (C) Osmotic potential (D) Solute potential

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Time: 1 hour 40 minutes

BOTANY (THEORY)

Max. Marks: 36

SECTION 'B'

(SHORT-ANSWER QUESTIONS)

Q. 2: Answer any nine (09) part questions. Each question carries two marks. **Marks: 18**

- i. Why protocista considered as polyphyletic kingdom?
- ii. Why photorespiration is considered as wasteful process?
- iii. Why insectivorous plant use insect as food?
- iv. Why chloroplast is said to be an energy converting organelles?
- v. Why bryophytes are called non-vascular plants?
- vi. Write the difference b/w any one of the following:
 - a) Gram+ve and Gram-ve bacteria
 - b) Photosynthesis and respiration
 - c) Bryophyte and tracheophyta
 - d) Prokaryotes and eukaryotes
- vii. Describe the role and deficiency symptoms of nitrogen and potassium in plants.
- viii. Name the group of fungi on the basis of their reproductive structure.
- ix. What do you mean bacterial growth? Describe its phases.
OR Define genetic recombination .describe its types.
- x. Define bacteria. Describe the classification of bacteria on the basis of their shapes.
OR Define nuclear mitosis. Describe the classification of bacteria on the basis of flagella.
- xi. Name the structural component of xylem and phloem.
OR Define reverse trancription .what do you mean by positive and negative sense virus?
- xii. How many ATP and NADP require fixing 1 carbon, 3 carbon,6 carbon and 12 carbon during dark reaction?
- xiii. Write the short note on any one of the following.
 - a) Sclerenchyma
 - b) Double fertilization
 - c) Bacterial flora of humans
 - d) Vernalization
 - e) Mycorrhizae
 - f) Lichen
- xiv. Define fermentation. Describe the types of fermentation and write economical importance of fermentation

SECTION "C"

(DETAILED – ANSWER QUESTIONS)

NOTE: Attempt any **TWO (02)** questions. All questions carry equal marks. **Marks: 18**

- Q.3** Define osmoregulation. Describe the classification of plants on the basis of osmotic adjustment.
- Q.4** Define bacteria. Describe the structure of bacterial cell with the help of labelled diagram.
- Q.5** Define respiration. Explain glycolysis pathway in detail.
OR Draw and describe the lytic and lysogenic cycle of bacteriophage in detail.
- Q.6** Explain the chemical composition of plasma membrane. Also describe its function in regulating cell interaction with environment.
OR Describe light independent reaction (C₃ cycle) of photosynthesis in detail.

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