



Mega Modern College Of Information Technology & Management Pvt. Ltd.

Barahathawa-05, Sarlahi, Nepal

2nd Assesment Examination-2082

Level : 1st Year

F.M. 60

Program : Diploma In Pharmacy

Subject : Chemistry

Time : 2:00 Hrs

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Group A (Very Short Questions)

Attempt any TEN questions: (10×2 = 20)

1. Define symbol with significance.
2. Determine the mass of 1 molecule of CaCO_3 .
3. Write the electronic configuration of Fe^{2+} .
4. Between nitrogen and oxygen, which has greater ionization potential? Why?
5. Write the Lewis structure of sulphuric acid.
6. Among hydrogen and carbon dioxide, which diffuses faster and why?
7. How much sodium iodide will saturate 60 g of water at 20°C if solubility is 17 at that temperature?
8. What are hygroscopic and efflorescent solids? Give one example of each.
9. Find the oxidation number of underlined atoms:
 - a. KMnO_4
 - b. K_2CrO_4
10. What is meant by antacid? Write its medical uses.
11. Define buffer solution.
12. Define normal solution and molar solution.

Group B (Short Questions)

Attempt any FOUR questions: (4×5 = 20)

13. Define ideal gas. Derive $PV = nRT$.
14. What do you mean by conjugate acid-base pair? Explain with example.
15. State and explain Faraday's first and second laws of electrolysis.
16. Define acidimetry and alkalimetry.

What weight of Na_2CO_3 is required to prepare 250 ml of its decinormal solution?



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What weight of Na_2CO_3 is required to prepare 250 ml of its decinormal solution?

17. Identify the oxidizing and reducing agents and balance the equation by oxidation number method.
18. Write the difference between amorphous and crystalline solids.
Write the biological importance of osmosis.

Long Questions

Attempt any TWO questions: (2×10 = 20)

19. Define and write any two uses of redox reactions in the medical field.
Write down the postulates of Arrhenius theory of ionization.
20. Explain Lewis concept of acid and base.
50 g of a solution saturated with a salt at 70°C is cooled to 20°C.
How much salt will crystallize out if its solubility at 70°C and 20°C are 100 and 20 respectively?
21. Write short notes on (any TWO):
 - a. Henry's law
 - b. Ionic product of water
 - c. Graham's law of diffusion
 - d. Limiting reagent

The End

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The End



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Barahathawa-05, Sarlahi, Nepal

2nd Assesment Examination-2082

Level : 1st Year

F.M. 20

Program : Diploma In Pharmacy

Subject : Chemistry (Objective)

Time : 20 Min.

Choose the best answer:

- Molecular formula of borax is:
 - $\text{Na}_2\text{B}_2\text{O}_7 \cdot 7\text{H}_2\text{O}$
 - $\text{NaB}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$
 - $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$
 - $\text{Na}_4\text{B}_2\text{O}_7 \cdot 10\text{H}_2\text{O}$
- 180 g of pure water is equal to ____ moles:
 - 1
 - 10
 - 100
 - 18
- Strongest force is present in:
 - Atom
 - Nucleus
 - Electron
 - Mass
- The most electronegative element is:
 - Na
 - O
 - Xe
 - F
- Which one of the following violates the octet rule?
 - PCl_3
 - AsF_5
 - CBr_4
 - NF_3
- Which gas diffuses faster among them?
 - N_2
 - H_2
 - SO_2
 - CH_4
- The value of absolute zero temperature in Kelvin scale is:
 - 0°C
 - 273°C
 - 0 K
 - 273 K
- When a liquid is cooled, its viscosity:
 - Increases
 - Decreases
 - Remains the same
 - First increases then decreases
- The process in which matter converts from gaseous state to liquid state is called:
 - Evaporation
 - Condensation
 - Decantation
 - Sedimentation
- Diamond is an example of:
 - Covalent solid
 - Electrovalent solid
 - Solid with hydrogen bond
 - Pseudo solid
- A form of matter that has no fixed shape but has fixed volume. An example of this form is:
 - Mercury
 - Carbon dioxide
 - Ice
 - Hydrogen sulphide
- The oxidation state of nitrogen in NH_3 is:
 - $+\frac{1}{2}$
 - +3
 - 1
 - 3
- Which one is oxidised in the following reaction?
$$2\text{Cu}_2\text{S} + 3\text{O}_2 \rightarrow 2\text{Cu}_2\text{O} + 2\text{SO}_2$$
 - Cu is oxidised

- b. S is oxidised
 - c. Cu_2S is oxidised
 - d. CuO is oxidised
14. Which of the following is an example of a weak acid?
- a. HCl
 - b. H_2SO_4
 - c. CH_3COOH
 - d. HNO_3
15. Which one is the strongest Brønsted base among the following ions?
- a. ClO^-
 - b. ClO_2^-
 - c. ClO_3^-
 - d. ClO_4^-
16. An aqueous solution having $\text{pH} = 6$ is:
- a. Base
 - b. Salt
 - c. Acid
 - d. Amphoteric
17. The P^{OH} of a solution is 6.0, its pH will be:
- a. 6
 - b. 8
 - c. 0
 - d. 14
18. Which of the following compound is a primary standard substance?
- a. KMnO_4
 - b. AgNO_3
 - c. NaOH
 - d. Anhydrous Na_2CO_3
19. What is the normality of a solution containing 3.65 gm of HCL in 1 litre of the solution?
- a. 1 N b. 0.5 N c. 0.1 N d. 2 N
20. A compound has high intermolecular attraction then it has
- a. Low vapour pressure
 - b. low boiling point
 - c. low surface tension
 - d. low viscosity

The End



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Barahathawa-05, Sarlahi, Nepal

2nd Assesment Examination-2082

Level : 1st Year

F.M. 50

Program : Diploma In Pharmacy

Subject : Zoology

Time : 3 Hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

A. Select the best answer from the given question. (1*10=10)

- The tissue that covers the body surface and lines internal organs is:**
 - Connective tissue
 - Muscular tissue
 - Epithelial tissue
 - Nervous tissue
- Voluntary muscles are also known as:**
 - Smooth muscles
 - Cardiac muscles
 - Striated muscles
 - Involuntary muscles
- How is *Trichomonas vaginalis* primarily transmitted?**
 - Sexual contact
 - Contaminated food and water
 - Air
 - Insect bites
- Which organ produces insulin and gucagon?**
 - Liver
 - stomach
 - Pancreas
 - Small intestines
- Which of the plasmodium species is responsible for the most severe form of malaria**
 - Plasmodium vivax*
 - Plasmodium ovale*

- Plasmodium malariae*
- Plasmodium falciparum*

- The windpipe is also known as:**
 - Bronchus
 - Larynx
 - Trachea
 - Pharynx
- Which branch of zoology deals with the study of reptiles?**
 - Ornithology
 - Herpetology
 - Neurology
 - Chodrology
- What is the infective stage of *Entamoeba histolytica*?**
 - Trophozoites
 - Sporozoites
 - Cyst
 - Oocyst
- Which blood cells help in clotting of blood?**
 - RBC
 - WBC
 - Platelets
 - Plasma
- The parasites which complete their life cycle in two host are called**
 - Monogenetic
 - Digenetic
 - Obligatory
 - Facaultative

B. Give the very short answer for the following questions

- Define host and parasites with example? (1+1)
- Name any two medically important protozoan parasites? Write the diseases caused by *Aedes aegypti*? (1+1)
- Write any four adaptive features of parasites which help them to adjust in the body of host? (1+1)
- What is Osteoblast? Name the protein present in muscular tissue? (1+1)

15. Write down the dental formula of human teeth? Which proteolytic enzyme is secreted in stomach? (1+1)

C. Give the short answer for the following questions.

16. Define ectoparasites and obligatory parasites? Give six different between *Taenia solium* and *Taenia saginata*? (5)

17. Define tissue? Compare and contrast between simple and compound epithelial tissue? (5)

18. Describes the morphology of *Giardia lamblia* with well labelled diagram? (5)

19. Define helminthology? Describes the various scope of zoology? (5)

D. Give the long answer for the following questions. (Any one)

20. Describe the morphology and life cycle of *Leishmania donovani*. Also write the diseases and control measures of this diseases? (10)

21. Define respiratory system? Describes the structure and function of mammalian digestive system with well labelled diagram? (10)

Best Wishes



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2nd Assesment Examination-2082

Level : 1st Year

F.M. 50

Program : Diploma In Pharmacy

Subject : Botany

Time : 2 Hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

A. Select the best answer from the given questions (1*10=10)

- Turner syndrome is represented by?
 - XXX
 - XO
 - XXX
 - XXY
- In ecosystem energy flow is?
 - Unidirection
 - Bidirection
 - Multidirection
 - Tridirection
- The five system of classification was proposed by?
 - R.H Whittaker
 - Carolus Linneaus
 - Carl wies
 - Hippocrates
- Which level of biodiversity deals with variation within a species?
 - Species diversity
 - Genetic diversity
 - Ecosystem diversity
 - Community diversity
- Which of the following is a saturated fatty acid?
 - Oleic acid
 - Linoleic acid
 - Stearic acid
 - Arachidonic acid
- Which nitrogenous base is present in RNA but absent in DNA?
 - Thymine
 - Uracil
 - Guanine



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- d. Adenine
- 7. Mendel works on
 - a. Pisum sativum
 - b. Lathyrus odoratus
 - c. Glycine max
 - d. All of these
- 8. Kingdom Monera includes
 - a. Multicellular eukaryotes
 - b. Unicellular eukaryotes
 - c. Unicellular prokaryotes
 - d. Multicellular prokaryotes
- 9. Plants can store food in the form of
 - a. Glycogen
 - b. Starch
 - c. Chitin
 - d. Heptulose
- 10. Ozone layer depletion is mainly caused by
 - a. Dust particles
 - b. CFC
 - c. CO_2
 - d. Chlorine

B. Give the very short answer for following question. (5*2=10)

- 11. Define genus and species with example?
- 12. What is meant by mutagens and food chain?
- 13. List out the abiotic and biotic factors of ecosystem?
- 14. Give the differences between saturated and unsaturated fatty acid?
- 15. What is genetic code? List any four characteristics of genetic code?

C. Writes down the short answer for following questions (4*5=20)

- 16. How is chromosomal mutation alter the number and structure of chromosome?
Describe aneuploidy and euploidy?
- 17. Define pollution? What are the effect and control measures of air pollution?
- 18. Write any four function of protein?
- 19. Compare the pyramid of energy and pyramid of number?

D. Writes the long answer for the following questions (Any one) (10)

- 20. Define Ecosystem? Describes the pond ecosystem?
- 21. Mention the Watson and Crick model of DNA. Mention the function of DNA?

Best Wishes

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2nd Assesment Examination-2082

Level : 1st Year

F.M. 20

Program : Diploma In Pharmacy

Subject : Mathematics (Objective)

Time : 30 Min

Attempt all the questions: (20×1=20)

1. If $A = \{1,2,3\}$ and $B = \{3,4,5\}$ then $A \cap B$ equals
a. $\{1,2\}$ b. $\{3\}$ c. $\{4,5\}$ d. $\{1,2\}$
2. If $f(2) = \frac{x}{|x|}$ then value of $f(-1)$ is
a. -1 b. 1 c. 0 d. $\{-1,1\}$
3. The number of terms in the expansion of $(a + x)^8$ is
a. 8 b. 7 c. 9 d. 10
4. A^{-1} exists if A is
a. Singular b. Non Singular c. Symmetric d. None
5. The lines represented by $ax^2 + 2hxy + by^2 = 0$ are perpendicular to each other if
a. $h^2 + ab = 0$ b. $a+b=0$ c. $h^2 - ab = 0$ d. $a-b = 0$
6. Find the value of $\lim_{x \rightarrow a} \left(\frac{x^n - a^n}{x - a} \right)$
a. xa^{n-1} b. nx^{n-1} c. na^x d. none
7. The value of $\lim_{x \rightarrow 0} \frac{|x|}{x}$ is
a. 1 b. -1 c. 0 d. Not defined
8. $\frac{d(x^n)}{dx}$ equals
a. nx^n b. nx^{n-1} c. nx^{n+1} d. n^{x-1}
9. A function $y=f(x)$ is increasing if
a. $f^1(x) < 0$ b. $f^1(x) = 0$ c. $f^1(x) > 0$ d. $f^1(x) \geq 0$
10. $\int \frac{1}{x} dx$ equals
a. $\log x + c(b)$ b. $\frac{1}{x^2} + c$ c. $-\frac{1}{x}$ d. None
11. $\int_0^3 x^5 dx$ equals
a. 243 b. $\frac{243}{2}$ c. $\frac{x^6}{6}$ d. $\frac{243}{4}$
12. $\int uv dx$ equals to
a. $u \int v dx - \int \left(\frac{d(u)}{dx} \cdot \int v dx \right) dx$
b. $u \frac{dv}{dx} + v \frac{du}{dx}$
c. $v \int v dx - \int v du$
d. None
13. $\lim_{x \rightarrow 0} \left(\frac{\log(x+1)}{x} \right)$ equals
a. 1 b. -1 c. 0 d. 2
14. If $b^2 - 4ac = 0$ then the roots are
a. equal b. imaginary c. unequal d. None
15. Find the value of $\begin{vmatrix} 3 & 8 \\ 5 & 4 \end{vmatrix}$ is
a. -4 b. 6 c. 8 d. 4
16. Find the value of $\log_7 49$ is
a. 1 b. 2 c. 7 d. 49
17. The size of the matrix $\begin{bmatrix} 1 & 2 & 3 \\ 4 & 1 & -2 \end{bmatrix}$ is
a. 2×3 b. 3×2 c. 3×3 d. 2×2
18. If $y = 2x^3$ then $\frac{dy}{dx} =$
a. $2x^3$ b. $6x^2$ c. $8x$ d. $9x^2$
19. Statistical results are
a. always correct b. always incorrect c. not absolutely correct
d. None of the above
20. The number of the subsets of set $\{1,2,3\}$ is
a. 3 b. 4 c. 6 d. 8



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2nd Assesment Examination-2082

Level : 1st Year

F.M. 60

Program : Diploma In Pharmacy

Subject : Mathematics

Time : 2:30 Min.

Group "A" (10×2=20)

1. Rewrite the following using absolute value sign: $-3 \leq x \leq 7$.
2. Prove that: $(\log x)^2 - (\log y)^2 = (\log xy) \cdot \log\left(\frac{x}{y}\right)$
3. How many ways can be the letters of the word "MATHEMATICS" be arranged?
4. Find the 7th term of $(2x + y)^2$.
5. Find the matrix A if $\begin{bmatrix} 4 & 5 \\ -3 & 6 \end{bmatrix} + A = \begin{bmatrix} 10 & -1 \\ 0 & 5 \end{bmatrix}$.
6. Show that $x^2 + 6xy + y^2 + 4x + 12y - 5 = 0$ represents a pair of lines.
7. Evaluate : $\lim_{x \rightarrow 0} \frac{\sqrt{a+x} - \sqrt{a-x}}{x}$
8. Find the derivatives of $y = ax^2 + bx + c$.
9. Integrate : $\int_0^1 (3x^2 - x) dx$.
10. Integrate : $\int (\sqrt{x} - \frac{1}{\sqrt{x}}) dx$

Group "B" (4×5=20)

1. Evaluate: $\int_0^2 \frac{xdx}{\sqrt{x^2+4}}$
2. Find from first principle, the derivatives of $\sin(ax+b)$.
3. Prove that : $\begin{bmatrix} a-b-c & 2a & 2a \\ 2b & b-c-a & 2b \\ 2c & 2c & c-a-b \end{bmatrix} = (a+b+c)^3$.
4. Let $f: \mathbb{R} \rightarrow \mathbb{R}$ and $g: \mathbb{R} \rightarrow \mathbb{R}$ be defined by $f(x) = 2x+7$ and $g(x) = 4x^2 - 3$. Find $f \circ g(x)$ and $g \circ f^{-1}(x)$.

Group "C" (2×10=20)



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Subject : Mathematics

Time : 2:30 Min.

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Group "C" (2×10=20)

1. In a group of 300 families, 50% use filter water, 60% use boiled water. If 10% use neither of them, find how many use
- both of them
 - filter water only
 - boiled water only
- b. A committee is to be chosen from 11 men and 8 women and it is to consist of 3 men and 2 women. How many such committee can be formed?

OR,

Find the term independent of x in the expansion of $(x^2 + \frac{1}{x})^{12}$.

2. a. Find $\frac{dy}{dx}$, if $y = \frac{x^2-2x}{x+1}$.

OR,

Find the local maxima and minima for the function $f(x) = 2x^3 - 15x^2 + 36x + 7$

- b. What is statistics? Write its limitations.

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Barahathawa-05, Sarlahi, Nepal

2nd Assesment Examination-2082

Level : 1st Year

F.M. 60

Program : Diploma In Pharmacy

Subject : English

Time : 2 Hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Attempt all the questions:

Group 'A' very short answer questions (10x2=20)

1. Who was Mathilda?
2. Is the title "A respectable Woman" of the story suitable?
3. Where did Rakesh go after completing his degree?
4. Who is the speaker of the poem "New Nepal"?
5. Write any two effects of junk food on Teenagers' Health.
6. How is the sun described in the poem "A Day"?
7. Who are poor creatures? Every morning I wake
8. Who is the author of "The Six Million Dollar Man"?
9. Who is the main character in 'Malini'?
10. How is the marriage important for man?

Group 'B' Short answer questions (4x5=20) (Any four)

11. Why did Mathilda refuse to let the doctor examine her throat?
12. What was the imagination of Mrs. Baroda to Gouvernail about his Physique?
13. Describe the theme of the story "A devoted son".
14. What are the evil elements referred to in the poem "New Nepal"?
15. What is the speaker's hope at the end of the poem? "Every Morning I Wake"
16. Write a report on a recent excursion from your college.

Group 'C' Long answer questions: (10x2=20) (Any two)

17. Write an academic essay on the topic "Technical Education In Nepal" in about 200 words.



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4. Who is the speaker of the poem "New Nepal"?
5. Write any two effects of junk food on Teenagers' Health.
6. How is the sun described in the poem "A Day"?
7. Who are poor creatures? Every morning I wake
8. Who is the author of "The Six Million Dollar Man"?
9. Who is the main character in 'Malini'?
10. How is the marriage important for man?

Group 'B' Short answer questions (4x5=20) (Any four)

11. Why did Mathilda refuse to let the doctor examine her throat?
12. What was the imagination of Mrs. Baroda to Gouvernail about his Physique?
13. Describe the theme of the story "A devoted son".
14. What are the evil elements referred to in the poem "New Nepal"?
15. What is the speaker's hope at the end of the poem? "Every Morning I Wake"
16. Write a report on a recent excursion from your college.

Group 'C' Long answer questions: (10x2=20) (Any two)

17. Write an academic essay on the topic “Technical Education In Nepal” in about 200 words.

OR

18. Sketch the character of “Malini” and “Supriya” by Rabindranath Tagore.

19. Write a book review of any book you have read recently.

!!!Best Of Luck !!!

OR

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19. Write a book review of any book you have read recently.

!!!Best Of Luck !!!



मेगा मोडर्न कलेज अफ इन्फर्मेसन टेक्नोलोजी एण्ड म्यानेजमेन्ट प्रा. लि.

बरहथवा -०५, सर्लाही नेपाल

दोस्रो मूल्याङ्कन परिक्षा -२०८२

तह : प्रथम वर्ष

कार्यक्रम : डिप्लोमा ईन फार्मेसी

विषय : सामाजिक अध्ययन

पूर्णाङ्क: ४०

समय : २ घण्टा

समूह "क" वस्तुगत प्रश्नहरू

सबै प्रश्नहरूको उत्तर दिनुहोस्। (१०×१=१०)

सहि उत्तरमा ठिक चिह्न लगाउनुहोस्।

- नेपालमा पहिलो पटक स्थापना भएको विद्यालय कुन हो?
 - पद्म कन्या हाइस्कूल
 - तृजुद्ध हाइस्कूल
 - दर्बार हाइस्कूल
 - आदर्श हाइस्कूल
- नेपालमा राजतन्त्रको अन्त्य कहिले भएको थियो?
 - १४ जेठ २०६५
 - १५ जेठ २०६५
 - १६ जेठ २०६५
 - १५ जेठ २०६४
- नयाँ शिक्षा योजना कहिले लागू भयो?
 - वि.स. २०१९
 - वि.स. २०२८
 - वि.स. १९८९
 - वि.स. २००२
- कुन राणा प्रधानमन्त्रीले राणाहरूलाई ए, बी र सी श्रेणीमा वर्गीकृत गरे?
 - पद्म शमशेर

- चन्द्र शमशेर
 - जुद्ध शमशेर
 - मोहन शमशेर
- कोत पर्व कहिले भएको थियो?
 - वि.सं. १९०२ असोज ३
 - वि.सं. १९०४ असोज १२
 - वि.सं. १९०३ कार्तिक १२
 - वि.सं. १९०३ असोज २
 - नेपाली भाषाको उत्पत्ती कहाँबाट भएको हो?
 - भक्तपुर
 - सिँजा
 - गोर्खा
 - पर्वत
 - संवैधानिक राजतन्त्र भन्नाले के बुझिन्छ?
 - राजाको असिमित अधिकार भएको
 - राजाको संवैधानिक अधिकार भएको
 - राजालाई संवैधानिक अधिकार लागू नहुने
 - नेपालको राष्ट्रिय जनगणना २०७८ बमोजिम नेपालमा जातजातिको सङ्ख्या कति छ?
 - 124
 - 142
 - 135
 - 125
 - तलका मध्ये कुन प्रदेशमा मैथली भाषा बढी बोलिन्छ?
 - कोशी प्रदेश
 - लुम्बिनी प्रदेश
 - सुदुर पश्चिम प्रदेश
 - मधेश प्रदेश
 - तलका मध्ये जनसङ्ख्या वृद्धिको प्रमुख कारण कुन होइन?
 - प्रजनन दर
 - मृत्यु दर
 - बसाइँसराइ

d. विवाह

समूह "ख" अति सङ्क्षिप्त उत्तरात्मक प्रश्नहरू

कुनै पाँच प्रश्नको उत्तर दिनुहोस्। (५ × २ = १०)

11. चन्द्र शमशेरले गरेका कुनै दुईओटा प्रमुख सामाजिक सुधारहरूको नाम लेख्नुहोस्।
12. प्राचीन नेपालमा शासन गर्ने तीन वंश कुन कुन थिए?
13. नेपालको इतिहासमा मध्यकाल भनेर कुन समयावधिलाई भनिन्छ?
14. नेपालको कुनै दुईओटा सामाजिक समस्याहरू उल्लेख गर्नुहोस्।
15. नेपाल भाषा कुन लिपिमा लेखिन्छ?

समूह "ग" सङ्क्षिप्त उत्तरात्मक प्रश्नहरू

कुनै दुई प्रश्नको उत्तर दिनुहोस्। (२ × ५ = १०)

16. राणा शासन पतन हुनुका कारण के के हुन्?
17. नेपालको हिमाली क्षेत्रका मानिसहरूको सामाजिक जनजीवन वर्णन गर्नुहोस्।
18. जनसङ्ख्या वृद्धिका कुनै चार कारण उल्लेख गर्नुहोस्।

समूह "घ" लामो उत्तरात्मक प्रश्नहरू

कुनै एक प्रश्नको उत्तर दिनुहोस्। (१ × १० = १०)

19. धरातलीय स्वरूपका आधारमा नेपालको भौगोलिक विभाजनको वर्णन गर्नुहोस्।
20. नेपालमा जनसंख्या वृद्धिका कारक तत्वहरू उल्लेख गरी विस्तृत व्याख्या गर्नुहोस्।

समाप्त



**Mega Modern College Of Information Technology
& Management Pvt. Ltd.**

Barahathawa-05, Sarlahi, Nepal

2nd Assesment Examination-2082

Level : 1st Year

F.M. 60

Program : Diploma In Pharmacy

Subject : Anatomy & Physiology

Time : 2 Hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Very short answer questions: (1×10=10)

1. Define anatomy & Physiology.
2. Define anatomical position.
3. List the name of organs of digestive system.
4. List the name of organs of respiratory system
5. List the name of organs of reproductive system
 - i. Male
 - ii. Female
6. List the name of bones of lower limb.
7. List the name of bones of upper limb.
8. List the organ of endocrine system.
9. Draw and label the diagram of nine region of abdomen.
10. Define cell and tissue with example.

Short answer questions: (5×4=20)

1. Draw well labelled diagram of digestive system and dental formula of permanent teeth .
2. Draw labelled diagram of Liver with function.
3. Draw labelled diagram of Heart with its function.
4. Draw labelled diagram of female reproductive system with its function.
5. Draw labelled diagram of male reproductive system with its function.

Long answer questions: (15×2=30)

1. Define cell division. Explain mitosis cell division.
2. Explain menstrual cycle and spermatogenesis.

!!! Best Wishes !!!



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Mega Modern College Of Information Technology & Management Pvt. Ltd.

Barahathawa-05, Sarlahi, Nepal

2nd Assesment Examination-2082

Level : 1st Year

F.M. 40

Program : Diploma In Pharmacy

Subject : Physics

Time : 2 Hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Section A

Multiple Choice Questions (10×1=10)

- What is the dimensional formula of the coefficient of viscosity?
 - $[MLT^{-2}]$
 - $[ML^{-1}T^{-1}]$
 - $[ML^{-1}T]$
 - $[ML^2T^{-2}]$
- To achieve the maximum range, at which angle does the angle of projection be?
 - 30°
 - 45°
 - 60°
 - 80°
- Which law of motion is related to the projection of satellites?
 - First law
 - Second law
 - Third law
 - Gravitational law
- The unit of work is similar to:
 - Energy
 - Power
 - Specific heat capacity
 - Stefan's constant
- Newton's law of gravitation is valid for:
 - Earth only
 - Sun only

- Planets only
 - Everywhere
- What is called the ratio of stress to strain?
 - Coefficient of viscosity
 - Modulus of elasticity
 - Force constant
 - Elastic limit
 - What is the value of atmospheric pressure at sea level?
 - $1.01 \times 10^6 \text{ N/m}^2$
 - $1.01 \times 10^5 \text{ N/m}^2$
 - $1.01 \times 10^4 \text{ N/m}^2$
 - $1.01 \times 10^7 \text{ N/m}^2$
 - The temperatures at which Fahrenheit scale and Centigrade scale give same reading is:
 - 40°
 - 32°
 - -40°
 - -32°
 - What is the equivalent value of 100°C in Fahrenheit scale?
 - 0°F
 - 32°F
 - 100°F
 - 212°F
 - Rising warm air currents are an example of which type of heat transfer?
 - Conduction
 - Convection
 - Radiation
 - Conduction & Convection

Group B (3×2=6)

Attempt all questions

- Define thermal conductivity. Also write its unit.
- Distinguish between heat and temperature.
- Define capillarity. What are the factors on which it depends?

Group C (4×4=16)

Attempt all questions

- State and prove Archimedes' Principle.

15. Define linear and superficial expansion. Prove that $\beta = 2\alpha$, where symbols have their usual meanings.
16. Define specific heat capacity of substance. How can the specific heat capacity of solid be determined?
17. What do you mean by perfect black body? State and explain Stefan's law of black body radiation.

Group D (2×4=8)

Attempt any two questions

18.
 - a. A glass flask of volume 500 cm^3 is just filled with mercury at 0°C . How much mercury overflows when the temperature of the system is raised to 80°C ?
(Given: $\gamma_g = 1.2 \times 10^{-5} \text{ }^\circ\text{C}^{-1}$, $\gamma_m = 1.8 \times 10^{-4} \text{ }^\circ\text{C}^{-1}$)
 - b. Determine the amount of heat required to convert 1 kg of ice at -10°C to steam at 100°C .
(Given: specific heat of ice = $2100 \text{ J/kg}\cdot\text{K}$, latent heat of fusion = $3.36 \times 10^5 \text{ J/kg}$, latent heat of steam = $2.26 \times 10^6 \text{ J/kg}$)
 - c. A wire 8 m long and 4 mm in diameter is extended by 2 mm. What is the force applied and energy density?
(Given: $Y = 2 \times 10^{11} \text{ N/m}^2$)

!!! Best Wishes !!!



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2nd Assesment Examination-2082

Level : 1st Year

F.M. 30

Program : Diploma In Pharmacy

Subject : Anatomy & Physiology

Time : 30 Min

Each question carry 1 Marks.

1. The study of human body function is called
 - a. Anatomy
 - b. Physiology
 - c. Pharmacology
 - d. Pathology
2. The study of external structure of a plant is called
 - a. Histology
 - b. Morphology
 - c. Taxonomy
 - d. Phyllotaxy
3. Functional unit of liver is called
 - a. Kupffer cell
 - b. Hepatic lobule
 - c. Dust cell
 - d. Neuron
4. Which of the following is the primary function of the respiratory system?
 - a. Oxygen transportation
 - b. Removal of nitrogen from the body
 - c. Gas exchange
 - d. Absorption of nutrients
5. The basic structural and functional unit of the kidney is:
 - a. Neuron
 - b. Alveolus
 - c. Nephron
 - d. Sarcomere
6. Which of the following muscles is responsible for the movement of the shoulder joint?
 - a. Biceps brachii
 - b. Deltoid
 - c. Rectus abdominis
 - d. Triceps brachii
7. Which part of the brain is responsible for coordinating voluntary movements and maintaining posture?
 - a. Cerebrum
 - b. Cerebellum
 - c. Medulla oblongata
 - d. Thalamus
8. Which hormone is primarily responsible for regulating the body's metabolic rate?
 - a. Insulin
 - b. Cortisol
 - c. Thyroxine (T4)
 - d. Glucagon
9. The basic structural and functional unit of the muscle is:
 - a. Neuron
 - b. Alveolus
 - c. Nephron
 - d. Sarcomere
10. The basic structural and functional unit of the brain is:
 - a. Neuron

- b. Alveolus
 - c. Nephron
 - d. Sarcomere
11. Which of the following structures is primarily responsible for the exchange of gases in the lungs?
- a. Bronchi
 - b. Trachea
 - c. Alveoli
 - d. Bronchioles
12. What is the primary muscle involved in the process of inhalation?
- a. Diaphragm
 - b. Intercostal muscles
 - c. Abdominal muscles
 - d. Pectoral muscles
13. Which of the following is NOT a part of the conducting zone of the respiratory system?
- a. Nasal cavity
 - b. Trachea
 - c. Bronchioles
 - d. Alveoli
14. What is the role of surfactant in the lungs?
- a. To aid in the production of mucus
 - b. To prevent alveolar collapse
 - c. To transport oxygen in the blood
 - d. To regulate blood pH
15. Which gas law describes the relationship between the pressure and volume of gases?
- a. Boyle's Law
 - b. Charles's Law
 - c. Dalton's Law
 - d. Henry's Law
16. During which phase of respiration does the diaphragm contract and move downward?
- a. Exhalation
 - b. Inhalation
 - c. Resting phase
 - d. None of the above
17. Which of the following best describes tidal volume?
- a. The total volume of air exchanged during one complete respiratory cycle
 - b. The maximum amount of air a person can inhale after a normal inhalation
 - c. The amount of air exchanged during normal breathing
 - d. The volume of air remaining in the lungs after a maximal exhalation
18. What is the primary component of the respiratory control centers in the brain?
- a. Medulla oblongata
 - b. Thalamus
 - c. Hypothalamus
 - d. Cerebellum
19. What is the primary function of the smooth endoplasmic reticulum (SER)?
- a. Protein synthesis
 - b. Lipid synthesis and detoxification
 - c. Energy production
 - d. Digestion of cellular waste
20. Which phase of the cell cycle is characterized by the replication of DNA?
- a. G1 phase
 - b. S phase
 - c. G2 phase
 - d. M phase

!!! Best Wishes !!!