

Open Book Test-2077

Bhadra 01, 2077, Monday

Grade: Nine

Full Marks: 15

Pass Marks: 06

Instruction to the student: *Manage answer sheets on your own and write your answers on them. You are allowed to use your textbook or other reference materials to find out the answer of the given questions. You are required to organize the answer in your own words. If your answer is found directly copied from the book, your answer will be invalid. Quality of your answer will determine the marks you will secure. You will have to submit the answer compulsorily in the Google Classroom of concerned subject latest by 5:00 PM on Bhadra 02, Tuesday.*

Subject- HPE

A. Give long answer to the following questions:

[5×3=15]

1. Define Health, Population and Environment education and explain how they are interrelated to one another.
2. What is migration? Discuss why people migrate from one place to another with special reference to Nepal.
3. Analyze the population distribution of Nepal by ecological regions and its implication on the socio-economic development of the country. Relate your answer to Unit 4.

Note:

- a. *Students are required to submit their answer papers on the given deadline. The papers submitted later than the deadline will automatically be invalid.*
- b. *The answer paper must be a single file; i.e. students should compulsorily convert the photos into a PDF file.*
- c. *Students are required to write their name and page number in the answer paper.*
- d. *Students are not allowed to take help from other people except the concerned teacher. Each student's answer will be tallied with others, if found the same, that will lead to invalidity of the answer and strict disciplinary action.*

Students must follow the standard format discussed by the teacher in the classroom.

Subject- Science

(Students have to submit the answer in the space provided in Google classroom within two days. The answer received after the due date is not acceptable.)

1. Both Work and Force are depending on three fundamental quantities length, mass and time. Are the SI unit of both quantities same? Justify your answer with appropriate reason. [5]
2. Inertia is depends on mass of object. Justify this statement with two examples. [5]
3. Radicals involve in the NaCl are Na^+ and Cl^- but the radicals involve in the H_2O are not H^+ and O^{2-} .
What are the radicals involved in H_2O ? Why radicals of H_2O cannot be identified by the same method as that of NaCl? [5]

Subject- Mathematics

1. 54 students of class IX are taking part in sports or music or in both activities. Out of them 9 take part in both activities. The ratio of students who are taking part in sports to those taking part in music is 5:4.
 - a. How many students are taking part in sports?
 - b. How many students are taking part in music only?
 - c. Illustrate above information in Venn – diagram.
2. The length of room two times its breadth and contain 210m³ of air if the cost of painting the wall at Rs. 54 per sq. m. is Rs. 6804, find the height of room.
3. Factorize:
 - a. $100a^4 - 45a^2 + 4$
 - b. $\frac{p^4}{q^4} + \frac{q^4}{p^4} + 1$
 - c. $X^4 + 8x^2 - 65 + 18y - y^2$
 - d. $(a^2 - b^2)(c^2 - d^2) + 4abcd$

Subject- Computer

- 1) **Answer the following questions:** **[2×5=10]**
 - a) Write any two differences between analog computer and digital computer.
 - b) What is meant by generation of computer? Write any four features of fourth generation of computer.
 - c) What is Central Processing Unit? List its main components.
 - d) What is Control Unit? Write its functions.
 - e) What is memory unit? Write its functions.
- 2) **Convert the numbers as indicated.** **[2×1=2]**
 - a) $(125)_8 = (?)_2$ b) $(10110110)_2 = (?)_8$
- 3) **Perform the binary calculation.** **[2×1=2]**
 - a) $10100 - 1111$ b) $10110 \div 11$
- 4) **Write full form of:** **[2×0.5=1]**
 - a) UNIVAC b) BIOS

The End.