

नेपाल सरकार
शिक्षक सेवा आयोग
निम्न माध्यमिक तह, तृतीय श्रेणी, शिक्षक पदको
खुला प्रतियोगितात्मक विषयगत परीक्षा – २०८१

विषय : विज्ञान

समय : ३ घण्टा

पूर्णाङ्क : १००

उत्तीर्णाङ्क : ४०

सबै प्रश्नहरू अनिवार्य छन् । प्रत्येक खण्डका लागि बेग्लाबेग्लै उत्तरपुस्तिका प्रयोग गर्नुपर्नेछ, अन्यथा उत्तर पुस्तिका रद्द हुनेछ ।

Group A

1. What is atmospheric pressure? Describe an experiment to demonstrate the concept of atmospheric pressure in your classroom. How would you ensure students' engagement in your teaching?	2+6 +2
2. A student can ask 'why does a light bulb glow when connected to a battery?' How would you explain this concept? Design interactive activities to teach the differences between series and parallel circuits. How would you assess your students?	2+4 +4
3. How do you differentiate weather from climate? Write any three lesson objectives in the topic "soil" for grade 6 students. What pedagogical strategies can you apply in this lesson?	3+3 +4
4. Write the differences between monocotyledon and dicotyledonous plants with examples. Develop a lesson plan to teach grassland ecosystem through field visit method.	5+5
5. a) The existing curriculum of science and technology (grade 6-8) has recognized science as a product and process and ICT as a content and medium of instruction. Give your arguments in support of this statement.	6
b) Describe major deficiencies of letter grading system used in school level examination of Nepal.	4

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Group B

6. a) What are the basic assumptions of electronic theory of valency?	5
b) Differentiate ionization energy from electronic affinity with suitable examples.	5
7. a) State and explain the second law of thermodynamics. What are differences between a petrol engine and a diesel engine?	7
	3

b) Why does a refrigerator consume more power in the summer than in the winter to cool the same quantity of food by the same degree?	
8. a) Draw a well-labelled diagram of laboratory preparation of hydrogen gas. Describe the uses of hydrogen gas.	2+4
b) What is metallurgy? Describe the physical properties of iron.	1+3
9. Differentiate bacteria from virus. Draw the structure of DNA and explain its structure and process of replication.	2+2+3+3
10. What is climate change? Discuss its causes and effects. And also briefly mention the measures adopted by the Government of Nepal to mitigate adverse effects of climate change.	3+7
