TRIBHUVAN UNIVERSITY

2081-ii (New Course)

Bachelor / Education /7th Semester — Full Marks: 60

ICT.Ed.478 Teaching Method in ICT Education — Time: 3 hrs.

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

Attempt all questions

Group "B" 6 X 5 marks =30

1. Define Digital pedagogy? Explain based gamification based teaching improve student engagement in the classroom.
2. Discuss flipped classroom. Explain the essential component of flipped classroom in details.
3. Discuss the challenges and benefits of integrating ICT tools into lesson plans.

   OR

   What does the acronym SMART represent in terms of learning objectives?
4. Define assessment in classroom teaching. Discuss in details formative feedback in ICT- based classroom.
5. What is the TPACK model, and why is it crucial in integrating technology into lessons?

   OR

   What are the essentials of a well delivered lesson?
6. How can social media be used to take part students in collaborating learning?

Group "C" 2 X 10 marks =20

7. Analyze the impact of emerging technologies on student engagement and learning outcomes in classrooms.

   OR

   Create a semester plan in depth that incorporates formative evaluations, blended learning techniques, and cutting-edge ICT technologies to improve learning outcomes and student engagement.
8. Prepare a lesson plan for a specific topic using at least two ICT tools. Explain how these tools enhance student engagement and understanding.

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TRIBHUVAN UNIVERSITY

2081-ii (New Course)

Bachelor / Education /7th Semester — Full Marks: 40

ICT.Ed.477 Python Programming — Time: 3 hrs.

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

Attempt all questions

Group "B" — 6 X 5 marks =30

1. Write a Python program to demonstrate list slicing and the use of list comprehension.
2. Discuss the methods available for string manipulation in Python. Provide examples of split, replace, and strip methods.
3. Discuss the concept of data hiding in Python. Why is it important, and how is it achieved?

   OR

   Explain the different types of inheritance in Python with suitable examples.
4. Write a Python program to demonstrate file operations, including reading from and writing to a file.
5. Write a Python program to demonstrate how exceptions are handled when dividing a number by zero.
6. Write a Python program to design a simple GUI with labels, text entries, and buttons.

   OR

   Explain the role of tkinter in Python GUI programming. Discuss the use of at least three tkinter widgets.

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TRIBHUVAN UNIVERSITY

2081-ii (New Course)

Bachelor / Education /7th Semester **Full Marks: 40**

Ed.472 Research Project **Time: 3 hrs.**

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

Attempt all questions

Group "B" **6 X 5 marks =30**

1. What is the research gap? How can ICT tools like online databases and collaborative platforms help identify research gaps in Nepal's socio-economic studies?
2. Develop a hypothesis for a study on Nepal's digital economy and suggest ICT-based tools for presenting it in a research proposal.

   OR

   Discuss the integration of clear objectives and well-formulated hypotheses in a research proposal that investigates the role of ICT in enhancing agricultural productivity in Nepal.
3. Prepare a conceptual framework for analyzing the impact of ICT-based education at the basic level of school education in Nepal.
4. Explain the step-by-step process of conducting a systematic literature review using a problem statement in your specialization areas.

   OR

   What is the role of coding and decoding in data interpretation? Present an example supporting this statement.

5. Calculate and interpret the correlation coefficient from the data given below.

x	Pre-test	15	12	17	14	18
y	Post-test	14	13	15	16	18

6. Write a detailed note on the layout and structure of a research project report, including citations and referencing.

TRIBHUVAN UNIVERSITY

2081-II (New Course)

Bachelor / Education /7th Semester — Full Marks: 40

ICT.Ed.474 Multimedia in Education — Time: 3 hrs.

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

Attempt all questions

Group "B" 6 X 5 marks =30

1. What is Multimedia? List and describe the components of Multimedia.
2. Explain the concept of image compression. How does lossy compression differ from lossless compression?
3. Define digital audio. Discuss the techniques of noise reduction and normalization in audio editing.

   OR

   Define keyframing in video editing software. Explain the use of keyframes to animate the position, scale, rotation, and opacity of video elements.
4. Define live streaming and explain its significance in education and content delivery.
5. Explain the importance of video codecs. Differentiate between H.264/AVC and H.265/HEVC codecs.

   OR

   Describe the concept of metadata and its role in organizing and searching Multimedia content.
6. Analyze the role of Multimedia in enhancing educational experiences. What are some specific applications of Multimedia tools in teaching and learning?

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