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SEAT No. :

PE12978

[Total No. of Pages : 2

[6501]-1001

First Year B.Sc. (Aviation)

BAV 101 - T : WORKSHOP TECHNOLOGY

(NEP 2020) (2024 Pattern) (Semester - I)

Time : 3 Hours]

[Max. Marks : 60

Instructions to the candidates:

- 1) Answer all questions are compulsory.*
- 2) Figures to the right indicate full marks.*

Q1) Solve any five :

[5×2=10]

- a) What are the elements required for fire?
- b) What is the purpose of two hole drill motor?
- c) What is mean by draw filing?
- d) What is strap wrench?
- e) What are the color codes used in MSDS?
- f) What is surface plate?

Q2) Solve any five :

[5×3=15]

- a) What is the need of tool calibration?
- b) Explain the classification of tools.
- c) Name the various types of screwdrivers.
- d) What is the purpose of drive & aligning punches?
- e) Draw the diagram of file & name its parts.
- f) What is the difference between cutting angle & lip angle of drill bit.

P.T.O.

Q3) Solve any five :

[5×4=20]

- a) Write the operating procedure of fire extinguisher.
- b) Describe calibration record.
- c) Explain any two types of vises.
- d) What are the safety precautions to be taken while engine is running?
- e) What are the safety precautions to be taken during welding operation?
- f) Write care of file to be taken in workshop.

Q4) Solve any three :

[3×5=15]

- a) Explain drilling procedure with diagram.
- b) What are the general safety precautions to be taken while working in workshop?
- c) Explain flight line safety.
- d) Explain types of fits with neat diagram.



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[6501]-1002

F. Y. B.Sc. (Aviation)

BAV 102 T : ELECTRICAL FUNDAMENTALS

(NEP 2020) (2024 Pattern) (Semester-I)

Time : 3 Hours]

[Max. Marks : 60

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Figures to the right indicate full marks.*

Q1) Explain the following (any 5)

[5×2=10]

- a) Permeability
- b) Ohm's law
- c) Magnetism
- d) Lenz's law
- e) Seeback effect.
- f) Capacitor.

Q2) Attempt the following (any 5)

[5×3=15]

- a) What is a magnet and mention the property of a magnet.
- b) What are the factors affecting the capacitance of a capacitor.
- c) Differentiate between potentiometer & Rheostat.
- d) Two resistance having value of $60\ \Omega$ each connected in parallel. Calculate the total resistance.
- e) What are the factors affecting resistance.
- f) Explain electromagnetic principle.

P.T.O.

Q3) Attempt (any five) following

[5×4=20]

- a) Explain the construction and working principle of a transformer.
- b) What is working principle of a basic generator & mention its parts.
- c) Derive the expression for capacitor when connected in series.
- d) What are the different power supply sources.
- e) What are the different energy losses in a DC machine.
- f) What are different type of capacitors.

Q4) Attempt the following (any three)

[3×5=15]

- a) Write the difference between conductor insulator and semi conductor.
- b) Explain the direction reversal of a motor.
- c) Explain Nickel cad and lead acid battery.
- d) What are the different method for winding of armature & mention its difference.
- e) Write the difference between star connection & delta connection of three phase alternator.



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F.Y. B.Sc. (Home Science, Aviation, WBAT/Cyber Security,
AI & ML, Data Science & IT)

ENGLISH

AEC-101 : Professional Communication Skills
(2024 NEP Pattern) (Semester - I)

Time : 2 Hours]

[Max. Marks : 30

Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.

Q1) Answer any Six of the following :

[6 × 1 = 6]

- a) Change the following into past tense :
She writes letters every week.
- b) Identify the tense used : They had finished the task.
- c) Give one antonym of "Generous".
- d) Give one synonym of **Brave**.
- e) What is the one-word substitute for :
A place where books are kept for reading.
- f) Write one pair of **homonyms**.
- g) Identify the idiom and state its meaning :
"Hit the nail on the head"
- h) Form a word using the suffix "-ness".

Q2) Answer any Four of the following :

[4 × 2 = 8]

- a) Explain homonyms with two suitable examples.
- b) Distinguish between synonyms and antonyms with one examples each.
- c) Distinguish between synonyms and antonyms with examples.
- d) Explain subject-verb agreement with two examples.
- e) Write any two general speaking strategies for effective communication.

P.T.O.

Q3) Answer any Two of the following :

[2 × 4 = 8]

- a) Explain subject-verb agreement and its significance.
- b) Explain suffixes and prefixes with examples.
- c) Write a short note on collocations.

Q4) Answer any Two of the following :

[2 × 4 = 8]

- a) Explain the importance of meeting and greeting people in professional life.
- b) Explain the dos and don'ts of facing an interview.
- c) Write a dialogue between an interviewer and a candidate applying for the role of a digital marketing assistant.

