

AUTO SERVICE TECHNICIAN

Maximum Marks: 100

Time allowed: Two hours

1. *Answers to this Paper must be written on the paper provided separately.*
 2. *You will **not** be allowed to write during the first 15 minutes.*
 3. *This time is to be spent in reading the question paper.*
 4. *The time given at the head of this Paper is the time allowed for writing the answers.*
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5. *Attempt **all** questions from **Section A** and **any four** questions from **Section B**.*
 6. *The intended marks for questions or parts of questions are given in brackets[].*

Instruction for the Supervising Examiner

Kindly read aloud the Instructions given above to all the candidates present in the Examination Hall.

This Paper consists of 12 printed pages.

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Turn Over

SECTION A (40 Marks)

*(Attempt **all** questions from this **Section**.)*

Question 1

[20]

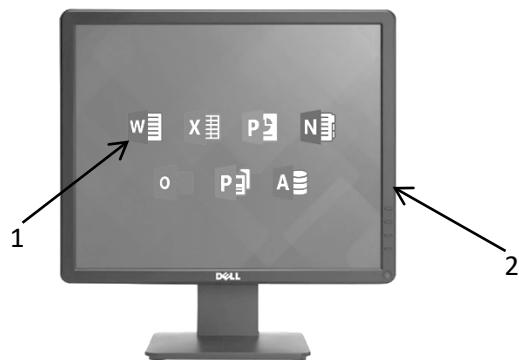
Choose the correct answers to the questions from the given options.

(Do not copy the question, write the correct answers only.)

- (i) Interpersonal, written, small-group and public communication are common types of _____ communication.
- (a) verbal
 - (b) visual
 - (c) scheduled
 - (d) written
- (ii) Gestures, expressions and body language are types of:
- (a) verbal communication
 - (b) non-verbal communication
 - (c) concrete communication
 - (d) self-communication
- (iii) The sentence: “Mohan changed the car tire.” is in:
- (a) passive voice
 - (b) active voice
 - (c) mixed voice
 - (d) negative voice

- (iv) Our emotional, mental, physical and social reaction to any demands or threats experienced by the individual are defined as:
- (a) Stress
 - (b) Feedback
 - (c) Message
 - (d) Intelligence
- (v) Time management, physical exercises, healthy diet, positivity and sleep are the techniques of:
- (a) Non-management
 - (b) Pain management
 - (c) Body management
 - (d) Stress management
- (vi) Self-motivated people are _____.
- (a) focused and dedicated
 - (b) physically fit
 - (c) culturally active
 - (d) visually active
- (vii) Which of the following contributes the most to greenhouse gas emissions?
- (a) Solar power plants
 - (b) Wind turbines
 - (c) Burning fossil fuels
 - (d) Hydroelectric power stations

- (viii) Which of the following is not a basic file operation?
- (a) Rename
 - (b) Compile
 - (c) Open
 - (d) Delete
- (ix) Organise, Prioritise, Control and Track are four important and effective steps for:
- (a) Time Management
 - (b) Screen-Time Management
 - (c) Homework Management
 - (d) Browsing Management
- (x) Identify 1 and 2 marked in the picture given below:



- (a) 1 - Input 2 - Output
- (b) 1 - Software 2 - Hardware
- (c) 1 - Monitor 2 - CPU
- (d) 1 - White color 2 - Black Color

- (xi) Identify the input device shown in the picture given below:



- (a) Keyboard
- (b) CPU
- (c) Mouse
- (d) Joystick
- (xii) **Assertion (A):** A folder is a location where a group of files can be stored.
- Reason (R):** A folder can be created by right-clicking on a location such as the Desktop and selecting 'New Folder'.
- (a) (A) is true and (R) is false.
- (b) (A) is false and (R) is true.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).
- (xiii) Sometimes we get emails from companies who are advertising a product or trying to attract you to their website. Such mails are called _____.
- (a) SPAM
- (b) Genuine emails
- (c) Informative emails
- (d) AI authenticated true emails

- (xiv) Worms, Trojan Horses, Online Predators and Internet scams are:
- (a) threats to computers
 - (b) essential for computers
 - (c) built within computers
 - (d) lifelines of computers
- (xv) Generating new ideas and turning them into profitable businesses is a part of:
- (a) Delegation
 - (b) Marketing
 - (c) Innovation
 - (d) Distribution
- (xvi) Which function of an entrepreneur involves dealing with uncertainty in business?
- (a) Coordination
 - (b) Risk-bearing
 - (c) Planning
 - (d) Monitoring
- (xvii) Why is dependence on non-renewable resources a problem for sustainable development?
- (a) They can be replaced easily.
 - (b) They help in reducing carbon footprint.
 - (c) They are limited and cause pollution.
 - (d) They are inexpensive and eco-friendly.

- (xviii) Using LED bulbs and switching off lights when not in use are effective ways to create sustainable cities and communities.
- (a) True
- (b) False
- (xix) Clear and concise communication is important at the workplace because many stakeholders exchange important information regularly.
- (a) True
- (b) False
- (xx) Motivation discourages individuals from achieving their goals.
- (a) True
- (b) False

Question 2

- (i) Fill in the blanks: [5]
- (a) _____ helps in coping with stressful situations. [*Positive thinking / Procrastination*]
- (b) Taking deep breaths and relaxing the body can help us manage _____. [*music / stress*]
- (c) A _____ is a machine that helps us with many tasks like typing and drawing. [*computer / mouse*]
- (d) A/An _____ is a person who starts and runs a business. [*entrepreneur / listener*]
- (e) We should save water and electricity to protect our _____. [*business / environment*]

- (ii) State whether the following statements are True or False: [5]
- (a) Listening carefully is an important part of good communication.
 - (b) Stress only affects mental health, not physical health.
 - (c) A computer can be damaged by dust and heat.
 - (d) Entrepreneurs are people who are afraid to take any risks.
 - (e) Planting trees, with initiatives like “*ek ped maa ke naam*” is one way to support sustainable development.

Question 3

- (i) Explain non-verbal communication with the help of two examples. [2]
- (ii) (a) What is *self-regulation* in time management? [2]
(b) What is the effect of distraction?
- (iii) Write *any two* steps to be followed to ensure computer security and privacy. [2]
- (iv) Mention *any two* qualities of a good entrepreneur. [2]
- (v) Give *two* examples of how you can manage stress at school. [2]

SECTION B (60 Marks)

(Answer ***any four*** questions from this ***Section.***)

Question 4

- (i) Explain the meaning of the following terms: [5]
- (a) 4 X 2 drive chassis vehicle
 - (b) 4 X 4 drive chassis vehicle
 - (c) 6 X 2 drive chassis vehicle
 - (d) 6 X 4 drive chassis vehicle
 - (e) Full forward chassis

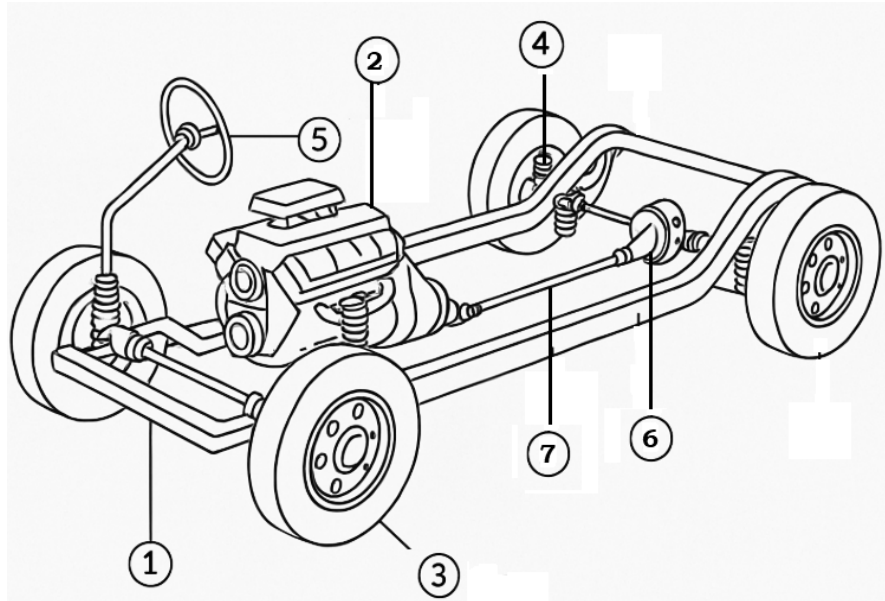
(ii) Name *five* components of: [5]

(a) A four-stroke petrol engine

(b) A four-stroke diesel engine

[Note: Do not repeat the same components for both engine types. Write only distinct components.]

(iii) Label *any five* parts of the systems or components of the vehicle shown in the picture given below. [5]



Question 5

- (i) Explain the following terms: [5]
- (a) Top Dead Centre
 - (b) Bottom Dead Centre
 - (c) Bore
 - (d) Stroke
 - (e) Clearance Volume
- (ii) Name *any five* main parts of an automotive engine that require lubrication. [5]
- (iii) Describe *any five* methods used for cooling an automobile engine. [5]

Question 6

- (i) Write *five* key functions of the fuel supply system in an automobile engine. [5]
- (ii) Explain *five* main functions of a gear box in an Automobile. [5]
- (iii) Differentiate between Manual, Semi-automatic and Automatic Transmission. [5]
Give one example of each type of transmission that is found in vehicles around you.

Question 7

- (i) Write *five* main functions of front axle and steering system. [5]
- (ii) Write *five* differences between a *wet sump* and a *dry sump* lubrication system. [5]
- (iii) Write *five* advantages of tubeless tyres. [5]

Question 8

- (i) Write the functions of the following Automotive Electrical systems: [5]
- (a) Battery
 - (b) Starter Motor
 - (c) Alternator
 - (d) Lighting system
 - (e) Horn
- (ii) Write the functions of the following Automotive service equipment: [5]
- (a) Two post lift
 - (b) Four post lift
 - (c) Wheel balancer
 - (d) Air compressor
 - (e) Pneumatic tools
- (iii) Write *five* important steps which should be followed while changing the oil filter and oil of the engine during a car service. [5]

Question 9

- (i) Write *five* key steps of changing the Air Filter of a car. [5]
- (ii) What are the key elements of effective customer service in the automobile service industry? [5]

(iii) Identify the tools shown below and write their uses.

[5]

(a)



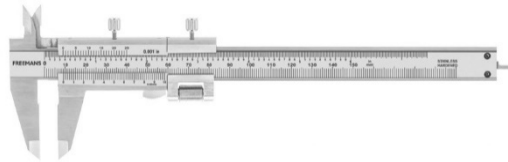
(b)



(c)



(d)



(e)

