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Question Paper Code : 57025

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2014.

Second Semester

Civil Engineering

HS 6251 – TECHNICAL ENGLISH – II

(Common to all branches except Marine Engineering)

(Regulation 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Change the following into passive voice: (2 × 1 = 2)
 - (a) Pinto bought a new watch last month.
 - (b) The old lady tells interesting stories.
2. Fill in the blanks with suitable forms of the homophones given in brackets: (4 × ½ = 2)
 - (a) Although he walked two kilometers a day, he could not _____ his weight. (loose, lose)
 - (b) The lady of the house faced many difficulties in the absence of her _____ (made, maid)
 - (c) The child _____ the ball into the tank. (through, threw)
 - (d) They met _____ friends in the park. (there, their)
3. Fill in the blanks with modal verbs conveying the meaning indicated in brackets: (4 × ½ = 2)
 - (a) Dhoni _____ play cricket well. (ability)
 - (b) _____ we go for a walk? (suggestion)
 - (c) It _____ rain today. (possibility)
 - (d) He _____ take care of his parents in their old age. (moral obligation)
4. Give the meaning of the phrasal verbs as they are used in the following: (4 × ½ = 2)
 - (a) Sachin rang up his mother.
 - (b) He takes after his father.
 - (c) The thief broke into the house last night.
 - (d) The chief guest gave away the prizes to the winners.
5. Complete the following 'if' clauses: (2 × 1 = 2)
 - (a) If I get a new job, _____.
 - (b) _____, she would have completed her journey.
6. Use TWO of the following as both verb and noun in sentences of your own: (4 × ½ = 2)
 - (a) bank,
 - (b) conduct,
 - (c) lead,
 - (d) wind.
7. Combine the following with appropriate cause and effect expressions: (2 × 1 = 2)
 - (a) Neeraja did not go to college yesterday. She had a high fever.
 - (b) Nalini fainted in the class. She did not have her breakfast.
8. Give numerical expressions for the following: (4 × ½ = 2)

e.g. a period of 60 hours — a 60-hour period

 - (a) a gathering of 250 students
 - (b) a seminar for two days
 - (c) a colony with 175 houses
 - (d) a fleet of 3000 cars

9. Use TWO of the following idioms in sentences of your own: (2 × 1 = 2)
 (a) burn the midnight oil (b) at the drop of a hat
 (c) a piece of cake (d) miss the boat
10. Give a word that collocates with the following : (4 × ½ = 2)
 e.g. mountainous — mountainous region
 (a) remote, (b) drastic,
 (c) devoted, (d) fast.

PART B — (5 × 16 = 80 marks)

11. Answer both the subdivisions (a) and (b).

- (a) Read the following passage and answer the questions given at the end: (8)

In a bid to avoid collisions between satellites and space debris Scientists are now using mini-satellites that work as 'space cops' to help control traffic tip in the sky. Scientists at California-based Lawrence Livermore National Laboratory used a series of six images over a 60-hour period taken from a ground-based satellite. They found that it was possible to refine the orbit of another satellite in low-earth orbit.

"Our mini-satellites would be orbiting and making the same sort of observations to help prevent satellite-on-satellite and satellite-on-debris collisions in space", said Lance Simms, lead author. Using the ground-based satellite, the Livermore team refined the orbit of the satellite 'NORAD 27006', based on the fist four observations made within the initial 24 hours, and predicted NORAD's trajectory to within less than 50 metres over the following 36 hours. By refining the trajectory of 'NORAD 27006' with their ground-based payload, the team believes they would be able to do the same thing for other satellites and debris once their payload is orbiting earth. This study was published in the *Journal of small Satellites*.

To help satellite operators prevent collisions in space, the Space-Based Telescopes for Actionable Refinement of Ephemeris (STARE) mission - led by Wim de Vries with Vincent Riot as lead engineer - intends to refine orbits of satellites and space debris to less than 100 metres. "This leads credence to the capability of STARE to accomplish its mission objectives," De Vries said. The STARE mission aims to reduce the 1-km uncertainty down to 100 metres or smaller to reduce the number of collisions, added Riot. The Livermore team was able to reduce the uncertainty to 50 metres, Accurately predicting the location of a satellite in low-earth orbit at any given time is difficult mainly because of the uncertainty in the quantities needed for the equations of motion, the study said.

- (i) Choose the correct responses: (4 × 1 = 4)

- (1) There is a traffic problem up in the sky.
 (A) True (B) False
- (2) Satellites will not hit against any other object.
 (A) True (B) False
- (3) Which type of satellite is used to reline orbits?
 (A) space-based satellite.
 (B) sky-based satellite.
 (C) earth-based satellite

(4) Why is it not possible to correctly predict the location of a satellite at any given time?

(A) problems in the number of satellites.

(B) problems in the equations of motion.

(C) problems in aeronautical engineering

(ii) Answer the following questions in a sentence or two: $(2 \times 2 = 4)$

(1) What is the mission objective of STARE?

(2) Who are space cops?

(b) Read the conversation between Arun Tiwari (AT) and Abdul Kalam (AK) from their book *Squaring the Circle* and answer the questions. (8)

AT : How did you make your mind strong?

AK : Three things are essential for one to have a strong mind. One must be a seeker of virtue, one must do things well and concentrate on what is being done. And finally there has to be discernment in your conduct.

AT : You are saying three things - virtue, concentration, and discernment in conduct - make a mind strong?

AK : And in that order. It is fundamental to be virtuous, to have moral excellence. How does it come? Confucius taught the five virtues a person should practice every day to live a healthy and harmonious life: the virtue of benevolence, charity and humanity, the virtue of honesty, and uprightness, the virtue of knowledge, the virtue of faithfulness and integrity, and the virtue of correct behavior, or propriety, good manners, politeness, ceremony and worship.

AT : And how do I get a sense of these virtues?

AK : It is indeed very simple. All human beings are innately virtuous. Children gradually lose it as they grow up in an uncaring and bad environment. I would call virtue a sense for the dignity of human life. You must have a feeling of humanity towards others and self-esteem for yourself. A virtuous mind is free from remorse.

AT : And how does one concentrate? There are also many distractions!

AK : Concentration is indeed the ability to direct your thinking in whatever direction you intend. Of course there are distractions. You can always manage external distractions but the biggest and most stubborn is the distraction of your own internal resistance. If you close your eyes and mind your breath, within minutes you would give up and open your eyes, There is a build-up of so much charge from repressed feelings inside you. Unless it is released, no high quality work can indeed be done.

AT : Please elaborate on discernment in our conduct.

AK : Discernment is to have the right view — to be able to see things and people as they are — and right resolve — to be able to act according to the right view.

- (i) Choose the correct responses: (4 × 1 = 4)
- (1) Which of the following is not a virtue recommended by Confucius?
(A) kindness (B) knowledge
(C) capacity
 - (2) How does self-esteem help an individual?
(A) It helps in building a strong society
(B) It helps in building a strong mind
(C) It helps in building good organizations
 - (3) Which distraction is "very serious"?
(A) friends (B) family
(C) inner self
 - (4) What is discernment?
(A) correct perception (B) correct attitude
(C) correct skill
- (ii) Answer the following questions in a sentence or two: (2 × 2 = 4)
- (1) How do we make our mind strong?
 - (2) How do we lose our innate virtue?

12. (a) Write a letter to a friend inviting him, to attend a festival organized in your college. (16)

Or

(b) Write a letter to your friend reviewing a film you watched recently. (16)

13. (a) Suppose you attended a meeting of your College environmental club. Write the minutes of the meeting. Give details of the date, time, venue, members who attended, topics discussed, and the resolutions adopted in your minutes. (16)

Or

(b) Suppose you are a manager of a company. Write a report on a fire accident that occurred in your company. (16)

14. (a) Write a letter of application for the post of an assistant engineer to The Human Resource Manager, HRC Communications Ltd., 390, Lake View Road, Santhome, Chennai-600004. Attach a separate résumé with your letter. (16)

Or

(b) Write a letter of application for the post of Team Leader to The Human Resource Manager, Mayday Motors Ltd, 327. G.T. Naidu Road. Coimbatore. Write the details of your qualification and experience within the application letter. (16)

15. (a) Write a Feasibility Report on introducing a new scheme for generating employment to the large number of unemployed engineers in our country for submission to the Commissioner, Department of Labor, Government of India, New Delhi. (16)

Or

(b) Write a brief Project Report on completion of a residential building for tsunami-affected people to the Secretary, Department of Housing, Government of Tamilnadu, Chennai. Give details of the purpose, background, budget estimate, company hired for construction, the beneficiaries, time, etc. Use a table or chart, where necessary. (16)