L 1109

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2006.

First Semester

Civil Engineering

HS 1101 – ENGLISH

(Common to All Branches of Engineering and Technology Except Marine Engineering)

(Regulation 2004)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write a single sentence definition for each of the following in about twenty words.

   (a) Battery

   (b) Dynamo.

2. Make compound nouns (noun + noun) of the following expressions.

   (a) The process of communicating to different places in the world using satellites.

   (b) A cylinder that is filled with gas.

   (c) A narrow long tube that is made of metal.

   (d) A department that assures the quality of raw materials and finished goods in an industry.

3. Fill in the blanks with suitable prepositions/articles.

   Children have been playing ———— toys ———— ages. In fact, ———— very early toys are said ———— be made ———— 2000 B.C. ———— toy is not simply ———— object ———— amusement; it can be educative also.

4. Correct the mistakes in the following passage:

The two thieves shaved all the money among themselves without informing none of there other two friends whom help is required to loot the money from the unsuspected traveller who travel from Chennai to Vijayawada.

5. Change the following into impersonal passive:

(a) They have successfully installed the new machinery in the factory.

(b) A skilled operator can carry out many operations on a CNC machine.

6. Fill in the blanks in the following sentences with the proper forms of the words given in brackets by adding suitable prefixes/suffixes.

(a) The ———— (time) help given by the coach was very ———— (value).

(b) The ———— (care) ———— (listen) succeeded in the listening test.

(c) The ———— (comprehend) questions were not ———— (answer) by many of the students.

(d) The Manager ordered the immediate ———— (remove) of all ———— (use) machines.

7. Choose the correct meanings for the words in **bold type** in the following sentences from the ones given in brackets.

(a) The unexpected influx of refugees from the border towns severely affected the already **scarce** resources of the city.

(light, insufficient, inefficient, poor)

(b) The new material is very **ductile** and can be easily moulded into any shape.

(useful, beautiful, flexible, effective)

(c) The patient was greatly relieved when the doctor informed him that the tumour was not a **malignant** one.

(malicious, curable, severe, very harmful)

(d) The home team suffered an **ignominous** defeat in their match against the visitors.

(enormous, great, disgraceful, emotional)

8. Fill in the blanks with the correct forms of the verbs given in brackets.

Computers ———— (become) so indispensable today, that everyone of us ———— (think) that computer skills, ———— (be) very essential for any job. So, every year thousands of students ———— (join) the many institutes offering computer education.

9. Complete the following statements mentioning the conditions in which something will happen.

(a) If the furnace temperature reaches 400 degree centigrade ——————.

(b) If the raw materials had come in time ——————.

10. Fill in the blanks with appropriate *phrasal verbs* using the clues given in brackets.

(a) The aircraft will —————— fuel in another half an hour. (exhaust)

(b) One should not —————— the stipulated speed limit on this road. (exceed)

(c) This chapter —————— different kinds of fuel. (consider)

(d) On his father's death, he —————— the management of the Company. (assumed control)

PART B — ($5 \times 16 = 80$ marks)

11. Read the following passage and answer the questions that follow:

The launching of the first satellite by the Russians in 1957 began with what was known as the 'space race', the first stage of which culminated with the Americans landing on the moon twelve years later. A whole range of satellites now orbit the Earth and are used for a variety of purposes.

LOW ORBIT SATELLITES, the typical height of which varies from 150 to 450 kilometers, are of little use for telecommunications for they are only in line of sight of each earth station for about 15 minutes. Their rotation period around the Earth is about one and a half hours and their main use is remote sensing, a field in which digital processing techniques are proving especially valuable. A low orbit satellite equipped with a multispectral scanner system (MSS), can observe the Earth in great detail providing us with extremely accurate information about agriculture, forestry, water resources and pollution patterns. It also has a multitude of applications in such fields as weather forecasting, environmental monitoring, geology, oceanography and cartography. There are important defence implications too, since they can be used to 'spy' on the activities of a potential enemy.

Medium altitude satellites are used for telecommunications, especially in countries which cover a vast geographical area like the earlier USSR. They 'fly' at a typical height of 9,000 to 18,000 kilometers, orbiting the Earth in a period of five to twelve hours. They are in line of sight of the earth station between two and four hours.

The most important type of satellite for telecommunications is the **geosynchronous** or **geostationary** satellite positioned over the Equator at a height of 35,800 kilometers. Its rotation period is 24 hours, the same as the Earth's, and consequently, seen from the Earth, this type of satellite appears to remain motionless in the sky. It is within line of sight of an earth station for its entire life.

A communication satellite is, in essence of microwave relay station which receives signals in a given frequency band and retransmits them at a different frequency to avoid problems of interference between the weak incoming signal and the powerful retransmitted signal. The equipment which receives a signal, amplifies it, changes its frequency and then retransmits it, is called a transponder. A satellite can handle large amounts of traffic which it can send over vast areas of the Earth. It therefore represents a relatively cheap way of transmitting information over long distances. For countries which do not already have sophisticated cable or microwave networks the use of a satellite can be extremely beneficial as it can be used in their place.

The first satellite were seen as a way of communicating with people who lived in isolated areas of the world. As a result, earth stations began to appear in the remotest parts of the globe. The cost of satellite communication began to fall steadily and, consequently, satellites have to compete with submarine cables as a way of linking continents cheaply. With the arrival of optical undersea cables, however, a more balanced intercontinental circuits between the two are likely. Satellites were soon used to broadcast TV programmes 'live' from one side of the Earth to the other, and then to link up computer terminals in different parts of the world. The use of digital transmission and multiplexing techniques has led to an enormous increase in the capacity of satellites.

The international organization INTELSAT was created in 1964 to provide international communication services by satellite. In 1983 it operated and owned 16 space crafts in geosynchronous orbit representing an investment over three billion US dollars. In 1983 it handled two thirds of all international telephone and data communications and transmitted virtually all 'live' international television broadcasts. 109 nations are members of INTELSAT. Between 1979 and 1983 INTELSAT's traffic doubled, yet its communications charges decreased, despite a 73% rise in the worldwide cost of living index during that period.

(i) For each of the following pick out the correct response from the options given, based on the passage. $(4 \times 1 = 4)$

(1) The main use of the low orbit satellites is

(A) spying

(B) remote sensing

(C) weather forecasting

(D) environmental monitoring.

(2) A communication satellite is better than other communication means, because

(A) it is reliable

(B) it is quick

(C) it is cost-effective

(D) it is sophisticated.

(3) Communication satellites are not merely used for

(A) broadcasting TV programmes 'live' from one country to another

(B) linking computer terminals all over the world

(C) sending messages from one part of the world to another

(D) spying defence installations of other countries.

(4) Satellite communication was first used for

(A) testing the advances in electronics

(B) contacting people living in isolated areas

(C) improving relations between the nations

(D) reducing the cost of communication

(ii) Say, on the basis of the passage, if the following statements are true or false: $(6 \times 1 = 6)$

(1) Geosynchronous satellites are stationary and motionless.

(2) Low orbit satellites can be seen by earth stations once in every 15 minutes.

(3) Medium altitude satellites are positioned at a height of 9000 to 18000 KMs.

(4) A transponder strengthens the weak signals received from the earth.

(5) International communication through satellites came into effect in 1983.

(6) Optical fibre cables reduce the load on satellite communication.

(iii) Pick out from the passage, the single words that mean: $(6 \times 1 = 6)$

(1) reaching the highest point of some activity

(2) possible future effects or results

(3) exact

(4) as a result

(5) to be all alone

(6) act of getting in the path of something.

12. Two groups of sentences are given. The sentences are not in the proper order. Choose any one group of sentences and rearrange them in the proper order. Write the first few words of each sentence in your answer. (Don't give just the number of sentences).

(a) (i) For example, more than two decades ago, Eye surgeons realized the value of laser to treat eye defects.

(ii) Where the cancer can be directly and accurately attacked laser treatment does well.

(iii) It is so fine that only the target is attacked and its intensity is enough to destroy harmful cells.

(iv) Thus early cancer of the cervix has been widely and successfully treated.

(v) It is valuable because the beam can be focussed to spot one fiftieth the thickness of a human hair.

(vi) For cancer treatment the diseased cells must be killed while their healthy neighbours are left unharmed.

(vii) This type of cervix cancer is easy to reach.

(viii) Today the use of laser for treating eye defects has increased enormously.

(ix) When the laser strikes that inaccessible spot, it releases a chemical that kills these cells.

(x) While military scientists test lasers against satellites, surgeons use them as accurate scalpels.

(xi) Now its pin–point blasting power is used to destroy harmful cancer cells.

(xii) For cancers that are less accessible, through a new technique, a patient is injected with a chemical that attaches itself to the cancer cells.

Or

(b) (i) They are better at sports than right-handed people.

(ii) However, they are not as good at mathematics and languages.

(iii) Left–handed people can do certain things better than right–handed people.

(iv) The reason for this lies in the construction of the brain.

(v) Therefore, left–handed people are better at music, sports and dance.

(vi) The left controls reasoning or logical thinking.

(vii) In left-handed people, the right hemisphere of the brain is highly developed.

(viii) They are better at music and dance too.

(ix) But right-handed people are better at mathematics and languages.

(x) So the right-handed people are better at mathematics and languages.

(xi) On the other hand, the left hemisphere is highly developed in right-handed persons.

(xii) The brain's right hemisphere controls ability in sports, music and dance.

13. (a) Write a letter to your friend in a village about your experiences in the Engineering College. Tell him how you got admission and who guided you in your choice of college and branch. Inform him the value of your branch and also of the kind of teaching you are getting in your college and how it is different from your school education. Also tell him how you like your course and what your future plans are. Assume suitable names and addresses.

Or

(b) M/s Infosys Technologies, Bangalore are offering educational scholarships to students of engineering based on their merit and performance in extra-curricular activities. You want to apply for this and you require copies of your certificates and a letter of recommendation from your Principal regarding your achievements in extra-curricular activities. Write a letter to your principal, requesting him to permit you to take photocopies of the certificates, you had submitted to the college at the time of admission. You require them to be sent with your scholarship application. Also ask him to issue you a letter of recommendation about your extra-curricular activities.

14. (a) Describe an ordinary bicycle and point out why its use has to be popularised in today's world. Highlight its advantages over powered vehicles. Limit your answer to about 200 words.

Or

(b) Describe the interior of a crowded bus as seen from its inside. Highlight its conveniences in a state like Tamil Nadu and also point out the disadvantages of this mode of transport. Limit your answer to about 200 words.

15. (a) Today, the use of cement has increased enormously. Building activities have gone up many fold, thanks to the liberal sanction of house building loans by various agencies. Naturally, the demand for cement is high and these industries are making good profits. But, not many people know of the manufacture of cement from rice husk; that is equally strong as cement. An equal weight of rice husk and lime sludge (i.e. the waste lime sediment that is available in plenty in sugar and other industries) are mixed thoroughly so that it becomes a paste. This mixture is made into cakes of desired shape and manageable size and these cakes are dried completely in sunlight. Once they are dry, they are burnt in the open and the ash is collected. This ash is ground to a fine powder and what is obtained is rice husk cement.

Transform the above information into a flow chart.

Or

(b) Mr. Raghuraman considers himself a good manager of his money affairs. He prepares a definite budget for his salary of Rs. 20,000/- and sticks to it as far as possible. This is how he spends his salary for food, provisions and milk he allocates Rs. 8,000/- for rent he allocates Rs. 3,000/-. Transport charges take up Rs. 1,000/- of his salary. For entertainment, electricity and newspapers his budget provision is Rs. 2,000. For being ready for guests and visitors and for their hospitality he has earmarked Rs. 2,000/-. He saves Rs. 3,000/- through his P.F. and keeps the rest in reserve.

Convey the above information in a pie–chart.
