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## Question Paper Code : HS8101

B.E./B.Tech. DEGREE EXAMINATION, 2017

First Semester

Marine Engineering

HS 8101 – TECHNICAL ENGLISH – I

(Regulations 2017)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A(10×2=20 Marks)

- Match the words in column A with their meanings in column B : (4×½=2)

A	B
a) Conventional	i) Destroying through chemical action
b) Corrosion	ii) Containing poison
c) Toxic	iii) Use the force of something to produce power
d) Harnessing	iv) Normal and ordinary
- Fill in the blanks with the correct tense of the verb given in brackets : (4×½=2)
  - The Scientist \_\_\_\_\_ (work) in the research department for the past twenty years. Only last week, he \_\_\_\_\_ (retire) from work.
  - The students \_\_\_\_\_ (take part) in an intercollegiate sports meet next week and so they \_\_\_\_\_ (practice) now in the ground.
- Form compound words from the meaning given : (4×½=2)
  - support given by the media
  - jacket used in life saving situations
  - pot used for making tea
  - crime done through internet
- Define the following terms in a single sentence : (2×1=2)
  - science lab
  - water heater
- Frame full sentences using any of the cause and effect expressions : (4×½=2)

{Due to, Owing to, Lead to, Because of, As a result of}

  - Heavy rain in the catchment areas/dams were filled up.
  - Oil spill in the sea/marine creatures died.
  - Raju worked hard for the company / he was promoted as the Senior Manager.
  - The temperature in the reactor increased / it burst.

6. Change the following sentences in the indirect form : (2×1=2)

Reporter : Did you see the accident ?

Man : Yes, the bike rider was talking over the mobile phone before the accident.

7. Give the other forms of the words and complete the table : (4×½=2)

NOUN	VERB	ADJECTIVE
Construction	_____	_____
_____	_____	magnetic

8. Expand the following abbreviations and acronyms : (4×½=2)

a) LCD                      b) CEO                      c) RAM                      d) ISRO

9. Choose the correct verb that agrees with the subject : (4×½=2)

a) The teacher, along with his students, \_\_\_\_\_ (attend / attends) the ceremony.

b) Neither the captain nor the soldiers \_\_\_\_\_ (are / is ) wounded.

c) The committee \_\_\_\_\_ (was / were) appointed to look into the corruption case.

d) One of the trains \_\_\_ (has / have ) derailed and has caused the accident.

10. Frame sentences using **any two** of the following expressions : (2×1=2)

a) all of a sudden                      b) by and large

c) on the other hand                      d) in short

### PART – B(5×16=80 Marks)

11. Read the following passage and answer the questions given below :

In the film Star Wars : Episode IV – A New Hope, a future Jedi named Luke Skywalker watched as two suns set on his home planet, Tatooine. When that film was made some 30 years ago, the existence of a planet with two starts was pure science fiction. Now, astronomers say, it's a scientific fact.

On September 15, 2011, NASA, the U.S. space agency, announced the discovery of Kepler-16b, a circumbinary planet, or a planet in cumbinary the orbit of two stars. Scientists had previously discovered a few other objects orbiting two starts, but Kepler-16b is the first confirmed planet. "It's the best example we have of a Tatooine-like world from Star Wars," says Nick Gautier, a scientist at NASA's Jet Propulsion Laboratory in Pasadena, Calif. "Now we don't expect Luke Skywalker or anything else to be living on Kepler-16b, but if you could visit there, you would see a sky with two suns just like Luke did".

Star Power : The discovery was made by the Kepler space telescope, which is on a mission to find Earth-like exoplanets-planets in orbit around stars other than the sun. Kepler-16b is the 21<sup>st</sup> confirmed planet that Kepler has detected since its launch in March 2009.

Kepler-16b's star system is located between the constellations Cygnus and Lyra, about 200 light-years from Earth. A light-year equals the distance light travels through space in a single year, or about 5.9 trillion miles. The planet is about the size of Saturn, but, because it's gaseous, scientists don't believe it to be habitable.

Although it has two stars, Kepler-16b is probably much colder than Earth because neither star is as powerful as Earth's sun. One star is 69 percent of the mass of the sun. The other is only 20 percent of the mass of the sun. The two stars-together called a binary star-orbit around a common center. They cross paths every 41 days. The planet orbits around both stars every 229 days.

"We have two stars dancing around each other and in our line of sight, they eclipse each other", says Laurance Doyle, principal investigator for the SETI (Search for Extra-terrestrial intelligence) Institute in Mountain View, Calif. Then we have this exquisite little pirouette of the planet going around both of the stars.

**The Light Stuff :** Scientists are doing much more than admiring the fancy footwork of this dance in space. This artist's rendering shows the Kepler space telescope. Kepler has the largest camera ever launched into space. "One way to find exoplanets is to find stars whose planets orbit so they cross in front of the star visible from Earth", says Gautier. The Kepler telescope monitors the brightness of stars, he explains. When a planet crosses in front of a star during an eclipse, it dims some of the star's light for a few hours. By analyzing the changes in light, scientists can accurately determine the size and mass of the planet.

Astronomers hope that further study of binary star systems will help shed light on how planets are formed. "There are as many binary stars as single stars and over 2,000 eclipsing binary stars within Kepler's line of view," says Gautier. "So this could be very common".

**Look for Life :** Kepler's main mission, however, is to find Earth-sized planets that are the right distance from a star to have a liveable temperature. In February, 2011, NASA announced the discovery of 1,235 possible exoplanets. Now the challenge is to find one that could potentially support life. To date, Kepler has detected large gaseous planets like Jupiter that, because of their distance from their respective stars, would be as hot as Mercury. The telescope also has spied gas planets scope similar in size to Neptune in close orbit around stars. Kepler has even found rogue planets, planet-sized objects that appear to have broken free from the gravitational force of their stars so that they are no longer in orbit.

The discovery of Kepler-16b opens up a whole new world of possibilities. This is an example of another planetary system. A completely different type that we've never seen before," says Doyle. "Nobody's ever seen a place like this before – with one exception. I seem to remember seeing a place like this before about 30 years ago [when Star Wars premiered] in a galaxy far, far away".

D) Choose the correct answer for the questions give :

**(6×1=6)**

- 1) What fictional planet does the writer compare Kepler-16b to ?
  - A) Lyra
  - B) Pluto
  - C) Tatooine
  - D) Cygnus
- 2) How does the author describe Kepler-16b ?
  - A) as a rocky planet that orbits two stars
  - B) as a moon that crosses the path of several stars
  - C) as a planet probably much warmer than Earth
  - D) as a gaseous planet about the size of Saturn
- 3) Which of the following conclusions about the Kepler space telescope is supported by the passage ?
  - A) NASA will stop searching for planets with the telescope
  - B) The telescope will soon find that Kepler-16b supports life
  - C) Kepler-16b is the last planet the telescope will discover
  - D) The telescope will most likely discover more planets
- 4) Read this sentence from the passage :

“The planet is about the size of Saturn, but, because it's gaseous, scientists don't believe it to be habitable”.

In this sentence, the word habitable means

  - A) growing in size
  - B) carefully observed
  - C) suitable to live on
  - D) covered with holes

- 5) Which statement best describes the main idea of the passage ?
- A) The Kepler space telescope is on a mission to find Earth like exoplanets
  - B) Scientist Nick Gautier is studying exoplanets to learn how planets form
  - C) Kepler-16b's star system is located about 200 light-years from Earth
  - D) NASA recently announced the discovery of a circum binary planet
- 6) The question below is an incomplete sentence. Choose the word that best completes the sentence. Rogue planets are no longer in orbit \_\_\_\_\_ they have broken free from the gravitational force of their stars.
- A) before
  - B) however
  - C) because
  - D) although

II) Fill in the blanks with the correct words taken from the passage : (4×1=4)

- 7) The distance light travels through space in single year is called \_\_\_\_\_
- 8) The partial or total blocking of the light of one planet, star, or moon by another is called \_\_\_\_\_
- 9) The planets that orbit around stars are called \_\_\_\_\_
- 10) Kepler 16b is colder than earth because its \_\_\_\_\_

III) Answer the following question in **one** or **two** sentences : (3×2=6)

- 11) How might Laurance Doyle, principal investigator for the SETI Institute, have felt when he learned of the discovery of Kepler-16b ? How do you know ?
- 12) How should a planet be in order to be inhabited ?
- 13) Why are some planets called 'rogue planets' ?

12. Read the reports and attempt **any one** of the following questions : (16)

- a) A 13-year old boy drowned in the sea off Pattinapakkam on Monday. The boy was studying in class 7 in a private school. On Monday, he went to the beach to take a bath. A huge wave drowned him.

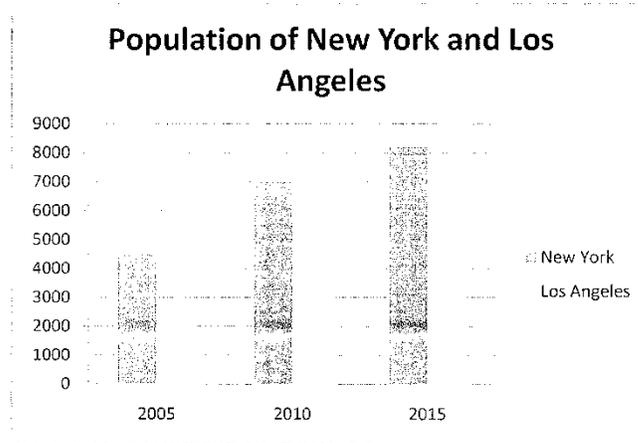
Write **eight** instructions to be given to young boys and girls to avoid such death and accidents caused near water bodies.

(OR)

- b) The real-time pollution levels in major cities of the country prove that living in much of India can actually be hazardous to your health.

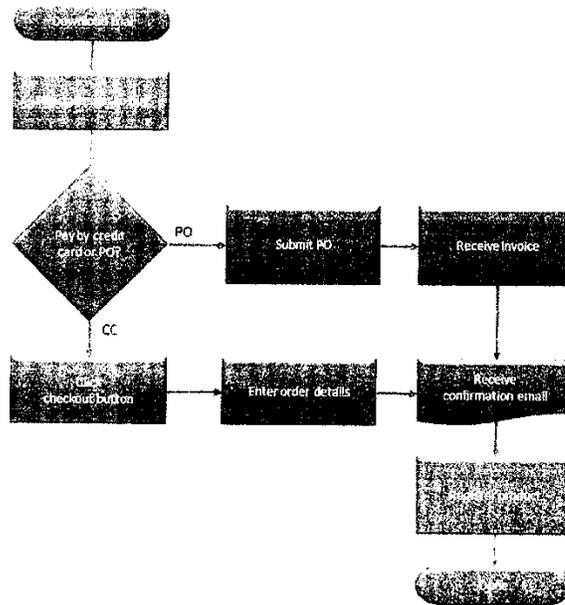
Write **eight** recommendations that could be offered to the government and people to make the cities free from pollutants.

13. a) The population of the two cities in the US are given for every five years in thousands. Describe and interpret the following figure in 250 words :



(OR)

- b) The process of buying a product online is given. Rewrite the flowchart in a full paragraph. Add necessary details.



14. a) The cases of dengue are increasing day by day. Some have lost their lives and many are hospitalised. Write a letter to the Director, Health Department, highlighting the problem and seeking assistance from the government.

(OR)

- b) Wild animals enter into the villages and destroy the crops. Write an email to the Editor of The Hindu on the diminishing habitat of the animals.

15. Attempt **any one** of the essays. Write in **250** words.

a) The children are addicted to video games. Analyse and write whether watching violent video games affect them positively or negatively.

(OR)

b) The agriculture sector in India is facing lots of problems. Write on the causes and effects of the problems facing agriculture.

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