

Part I Reading Comprehension (2*20=40 points)

Directions: There are five passages in this section. Each passage is followed by some questions or unfinished statements. For each of them there are four choices marked A, B, C and D. Decide on the best choice.

Passage 1

University Physics is intended for students of science and engineering. Primary emphasis is on physics principles and problem-solving; historical background and specialized practical applications have been given a place of secondary importance. Many worked-out examples and an extensive collection of problems are included with each chapter.

In this new edition, the basic philosophy and outline and the balance between depth of treatment and breadth of subject-matter coverage are unchanged from previous editions. We have tried to preserve those features that users of previous editions have found desirable, while incorporating a number of changes that should enhance the book's usefulness.

The textbook is adaptable to a wide variety of course outlines. The entire textbook can be used for an intensive course two or three semesters in length. For a less intensive course, many instructors will want to omit certain chapters or sections to tailor the book to their individual needs. The arrangement of this edition facilitates this kind of flexibility.

Conversely, however, many topics that were regarded a few years ago as of peripheral importance and were omitted from introductory courses have now come to the fore again in the life sciences, earth and space sciences, and environmental problems. An instructor who wishes to stress these kinds of applications will find this textbook a useful source for discussion of the appropriate principles.

In any case, it should be emphasized that instructors should not feel constrained to work straight through the book from cover to cover. Many chapters are, of course, inherently sequential in nature, but within this general limitation instructors should be encouraged to select among the contents those chapters that fit their needs, omitting material that is not relevant to the objectives of a particular course.

1. The textbook lays stress on _____.
 - A. the exposition of physical principles
 - B. the application of physics in different fields
 - C. the development of physics
 - D. the principles of physics and their application
2. Compared with the old one, this new edition _____.

- A. has improved the balance between theory and practice
 - B. is easier to learn
 - C. covers a wider range of subject-matter
 - D. has been made more applicable
3. The words “conversely, however” (Line 1, Para. 4) indicate that _____.
- A. many topics can be emphasized though they were usually omitted by instructors
 - B. many topics can be emphasized though they were not covered in the old edition
 - C. many topics have been added to the new edition as they were not covered in the old one
 - D. many topics have been added to the new edition though they can be omitted by the instructors
4. To meet the needs of a particular course, the teacher of this book can omit some of the contents provided that _____.
- A. his selection is based on the request of his students
 - B. he does not omit any chapter completely
 - C. he keeps an eye on the internal relations between the chapters
 - D. his students are particularly intelligent

Passage 2

Speeding off in a stolen car, the thief thinks he has got a great catch. But he is in for an unwelcome surprise. The car is fitted with a remote immobilizer, and a radio signal from a control center miles away will ensure that once the thief switches the engine off, he will not be able to start it again.

The idea goes like this. A control box fitted to the car contains a mini-cellphone, a microprocessor and memory, and a GPS satellite positioning receiver. If the car is stolen, a coded cellphone signal will tell the control center to block the vehicle’s engine management system and prevent the engine being restarted.

In the UK, a set of technical fixes is already making life harder for car thieves. “The pattern of vehicle crime has changed,” says Martyn Randall, a security expert. He says it would only take him a few minutes to teach a person how to steal a car, using a bare minimum of tools. But only if the car is more than 10 years old.

Modern cars are far tougher to steal, as their engine management computer won’t allow them to start unless they receive a unique ID code beamed out by the ignition key. In the UK, technologies like this have helped achieve a 31% drop in vehicle-related crime since 1997.

But determined criminals are still managing to find other ways to steal cars, often by getting hold of the owner’s keys. And key theft is responsible for 40% of the thefts of vehicles fitted with a tracking system.

If the car travels 100 meters without the driver confirming their ID, the system will send a signal to an operations center that it has been stolen. The hundred meters minimum avoids false alarms due to inaccuracies in the GPS signal. Staff at the center will then contact the owner to confirm that the car really is missing, and keep police informed of the vehicle’s movements via

the car's GPS unit.

5. What's the function of the remote immobilizer fitted to a car?
 - A. To allow the car to lock automatically when stolen.
 - B. To prevent the car thief from restarting it once it stops.
 - C. To help the police make a surprise attack on the car thief.
 - D. To prevent car theft by sending a radio signal to the car owner.
6. What is essential in making a modern car tougher to steal?
 - A. A GPS satellite positioning receiver.
 - B. A special cellphone signal.
 - C. A unique ID card.
 - D. A coded ignition key.
7. Why does the tracking system set a 100-meter minimum before sending an alarm to the operations center?
 - A. To give the driver time to contact the operations centre.
 - B. To allow for possible errors in the GPS system.
 - C. To keep police informed of the car's movements.
 - D. To leave time for the operations centre to give an alarm.
8. What will the operations centre do first after receiving an alarm?
 - A. Start the tracking system.
 - B. Locate the missing car.
 - C. Block the car engine.
 - D. Contact the car owner.

Passage 3

To live in the United States today is to gain an appreciation for Dahrendorf's assertion that social change exists everywhere. Technology, the application of knowledge for practical ends, is a major source of social change.

Yet we would do well to remind ourselves that technology is a human creation; it does not exist naturally. A spear or a robot is as much a cultural as a physical object. Until humans use a spear to hunt game or a robot to produce machine parts, neither is much more than a solid mass of matter. For a bird looking for an object on which to rest, a spear or robot serves the purpose equally well. The explosion of the Challenger space shuttle and the Russian nuclear accident at Chernobyl drive home the human quality of technology; they provide cases in which well-planned systems suddenly went haywire and there was no ready hand to set them right. Since technology is a human creation, we are responsible for what is done with it. Pessimists worry that we will use our technology eventually to blow our world and ourselves to pieces. But they have been saying this for decades, and so far we have managed to survive and even flourish. Whether we will continue to do so in the years ahead remains uncertain. Clearly, the impact of technology on our lives deserves a closer examination.

Few technological developments have had a greater impact on our lives than the computer revolution. Scientists and engineers have designed specialized machines that can do the tasks that once only people could do. There are those who assert that the switch to an information-based economy is in the same camp as other great historical milestones, particularly the Industrial Revolution. Yet when we ask why the Industrial Revolution was a revolution, we find that it was not the machines. The primary reason why it was revolutionary is that it led to great social changes. It gave rise to mass production and, through mass production, to a society in which wealth was not confined to the few.

In somewhat similar fashion, computers promise to revolutionize the structure of American life particularly as they free the human mind and open new possibilities in knowledge and communication. The Industrial Revolution supplemented and replaced the muscles of humans and animals by mechanical methods. The computer extends this development to supplement and replace some aspects of the mind of human beings by electronic methods. It is the capacity of the computer for solving problems and making decisions that represents its greatest potential and that poses the greatest difficulties in predicting the impact on society.

9. A spear or a robot has the quality of technology only when it _____.
A. is used both as a cultural and a physical object
B. serves different purposes equally well
C. is utilized by man
D. can be of use to both man and animal
10. The examples of the Challenger and Chernobyl cited by the author serve to show that _____.
A. technology is a human creation, so we are responsible for it
B. if not given close examination, technology could be used to destroy our world
C. technology usually goes wrong, if not controlled by man
D. being a human creation, technology is liable to error
11. According to the author, the introduction of the computer is a revolution mainly because _____.
A. the computer has revolutionized the workings of the human mind
B. the computer can do the tasks that could only be done by people before
C. it has helped to switch to an information technology
D. it has a great potential impact on society
12. The passage is based on the author's _____.
A. keen insight into the nature of technology
B. prejudiced criticism of the role of the Industrial Revolution
C. cautious analysis of the replacement of the human mind by computers
D. exaggerated description of the negative consequences of technology

Passage 4

The newspaper must provide for the reader the facts, unalloyed, unslanted, objectively selected facts. But in these days of complex news it must provide more; it must supply

interpretation, the meaning of the facts. This is the most important assignment confronting American journalism—to make clear to the reader the problems of the day, to make international news as understandable as community news, to recognize that there is no longer any such thing (with the possible exception of such scribbling as society and club news) as “local” news, because any event in the international area has a local reaction in manpower draft, in economic strain, in terms, indeed, of our very way of life.

There is in journalism a widespread view that when you embark on interpretation, you are entering choppy and dangerous waters, the swirling tides of opinion. This is nonsense.

The opponents of interpretation insist that the writer and the editor shall confine himself to the “facts”. This insistence raises two questions: What are the facts? And: Are the bare facts enough?

As to the first query, consider how a so-called “factual” story comes about. The reporter collects, say, fifty facts; out of these fifty, his space allotment being necessarily restricted, he selects the ten, which he considers most important. This is Judgment Number One. Then he or his editor decides which of these ten facts shall constitute the lead of the piece (This is an important decision because many readers do not proceed beyond the first paragraph.) This is Judgment Number Two. Then the night editor determines whether the article shall be presented on page one, where it has a large impact, or on page twenty-four, where it has little. Judgment Number Three.

Thus, in the presentation of a so-called “factual” or “objective” story, at least three judgments are involved. And they are judgments not at all unlike those involved in interpretation, in which reporter and editor, calling upon their general background, and their “news neutralism,” arrive at a conclusion as to the significance of the news.

The two areas of judgment, presentation of the news and its interpretation, are both objective rather than subjective processes—as objective, that is, as any human being can be. (Note in passing: even though complete objectivity can never be achieved, nevertheless the ideal must always be the beacon on the murky news channels.) If an editor is intent on slanting the news, he can do it in other ways and more effectively than by interpretation. He can do it by the selection of those facts that prop up his particular plea. Or he can do it by the way he gives a story—promoting it to page one or demoting it to page thirty.

13. The title that best expresses the ideas of this passage is _____.

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|--|----------------------|
| A. Interpreting the News | B. Choosing Facts |
| C. Subjective versus Objective Processes | D. Everything Counts |

14. Why does the writer of an article select ten out of 50 available facts?

- | | |
|----------------------------------|--|
| A. The subject is not important. | B. His editor is prejudiced. |
| C. Space is limited. | D. He is entering choppy and dangerous waters. |

15. What is the least effective way of “slanting” news?

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|---------------|--------------------|
| A. Selection. | B. Interpretation. |
| C. Placement. | D. Concentration. |

16. Why should the lead sentence present the most important fact?

- A. It will influence the reader to continue.
- B. It will be the best way to write.
- C. Some readers do not read beyond the first paragraph.
- D. It will gratify the editor.

Passage 5

When you think of the tremendous technological progress we have made, it's amazing how little we have developed in other respects. We may speak contemptuously of the poor old Romans because they relished the orgies of slaughter that went on in their arenas. We may despise them because they mistook these goings on for entertainment. We may forgive them condescendingly because they lived 2000 years ago and obviously knew no better. But are our feelings of superiority really justified? Are we any less blood-thirsty? Why do boxing matches, for instance, attract such universal interest? Don't the spectators who attend them hope they will see some violence? Human beings remain as bloodthirsty as ever they were. The only difference between ourselves and the Romans is that while they were honest enough to admit that they enjoyed watching hungry lions tearing people apart and eating them alive, we find all sorts of sophisticated arguments to defend sports which should have been banned long ago; sports which are quite as barbarous as, say, public hangings or bearbaiting.

It really is incredible that in this day and age we should still allow hunting or bull-fighting, that we should be prepared to sit back and watch two men batter each other to pulp in a boxing ring, that we should be relatively unmoved by the sight of one or a number of racing cars crashing and bursting into flames. Let us not deceive ourselves. Any talk of "the sporting spirit" is sheer hypocrisy. People take part in violent sports because of the high rewards they bring. Spectators are willing to pay vast sums of money to see violence. A world heavyweight championship match, for instance, is front page news. Millions of people are disappointed if a big fight is over in two rounds instead of fifteen. They feel disappointment because they have been deprived of the exquisite pleasure of witnessing prolonged torture and violence.

Why should we ban violent sports if people enjoy them so much? You may well ask. The answer is simple: they are uncivilized. For centuries man has been trying to improve himself spiritually and emotionally – admittedly with little success. But at least we no longer tolerate the sight madmen cooped up in cages, or public floggings of any of the countless other barbaric practices which were common in the past. Prisons are no longer the grim forbidding places they used to be. Social welfare systems are in operation in many parts of the world. Big efforts are being made to distribute wealth fairly. These changes have come about not because human beings have suddenly and unaccountably improved, but because positive steps were taken to change the law. The law is the biggest instrument of social change that we have and it may exert great civilizing influence. If we banned dangerous and violent sports, we would be moving one step further to improving mankind. We would recognize that violence is degrading and unworthy of human beings.

26. _____ there is little we can do to modify the weather, we can at least know what kind of weather to expect.
A. Since B. When C. While D. Unless
27. John's score on the test is the highest in the class; he _____ last night.
A. must study B. should have studied
C. must have studied D. is sure to study
28. Frank almost never received any education, _____?
A. would he B. did he C. didn't he D. wouldn't he
29. Even if his letter _____ tomorrow, it _____ too late to do anything.
A. will arrive, is B. should arrive, were
C. arrives, will be D. arrives, would be
30. We can hear _____ from the back of the room.
A. just as good B. just as easy C. just as well D. easily as well
31. Child _____ she is, the girl is quite independent.
A. like B. when C. for D. as
32. These photos will show you _____.
A. what does our university look like
B. what our university looks like
C. how does our university look like
D. how our university looks like
33. I guess Patricia will invite _____ you want.
A. whomever B. whatever C. whoever D. whichever
34. To obtain a satisfactory result, one must apply two _____ of paint on a clean surface.
A. coats B. levels C. times D. courses
35. We expect Mr. White will _____ Class One when Miss Jane retires.
A. take over B. take up C. take off D. take to
36. The river water was _____ from its old course into a new channel where they were building the dam.
A. turned B. switched C. shifted D. diverted
37. He was _____ with the power of acute observation.
A. conferred B. endowed C. equipped D. bestowed
38. Please _____ me on that subject.
A. enlighten B. acquaint C. inform D. instruct
39. The security guard _____ two men who were yelling in the courtroom.
A. expelled B. propelled C. repelled D. dispelled
40. My passport _____ last month, so I will have to get a new one.
A. elapse B. expired C. ended D. terminated
41. The speaker had no _____ in himself when facing a large audience.
A. experience B. progress C. objection D. confidence

42. The man drew the curtain and ____ the painting behind it.
A. projected B. revealed C. exposed D. brought
43. Not a ____ has been found so far that can help the police find the robber.
A. fact B. clue C. mark D. sign
44. He couldn't tell ____ from a distance whether it was Sam or his brother.
A. at large B. in name C. for sure D. in short
45. No matter how much progress we've made in our work, we shouldn't get ____.
A. complacent B. perfect C. satisfactory D. fortune
46. The ____ instrument requires a skilled operator.
A. artificial B. fashionable C. difficult D. intricate
47. The coupon ____ you to a free meal in our new restaurant.
A. confers B. entitles C. grants D. offers
48. The appeal to the senses known as ____ is a common technique in poetry.
A. imaginative B. imaginable C. ingenious D. imagery
49. The possibility that the explosion was caused by sabotage cannot be ____.
A. broken out B. ruled out C. cancelled out D. wiped out
50. The headquarters of this oil company is in London while its ____ companies are located in different parts of the world.
A. parent B. inferior C. subsidiary D. ultimate
51. Sitting on the table, two small cats were ____ round the inside of the empty ham tin.
A. swallowing B. licking C. chewing D. munching
52. Absorbed in her work, she was totally ____ her surroundings.
A. liable for B. oblivious of C. separated by D. concerned about
53. He is our best player, and is ____ to our team.
A. internal B. integral C. intelligent D. insistent
54. Sue joined the drama society but didn't seem to ____, so she left.
A. fit out B. fit up C. fit in D. fit in with
55. There are many _____ jewels in the museum.
A. valued B. invaluable C. valueless D. worthy
56. Mary tiptoed over and took the clock away because she hated to hear it ____ when she was trying to go to sleep.
A. sounding B. ringing C. ticking D. humming
57. Under this ____ pressure, some of the rocks even became liquid.
A. intensive B. weighty C. intense D. bulky
58. Of course, most immigrants did not get rich overnight, but the _____ of them were eventually able to improve upon their former standard of living.
A. maximum B. minority C. majority D. minimum
59. Nancy was surprised that they have ____; they seemed to be a happy couple.
A. split up B. broken down C. fallen through D. knocked out

60. The beach is in an ideal ____ to draw tourists.

- A. condition B. situation C. state D. publicity

Part III Blank Filling (1*10=10 points)

Directions: In this part, there is a passage with 10 blanks. Choose the right word from the list given below for each blank.

capacity	environment	quantities	dramatically	assumption
filled	strategy	confront	idea	debates
thinking	handle	heavily	quality	drown
accept	power	inherit	garbage	processes

One of the clearest signs that our relationship to the global environment is in severe crisis is the floodtide of 61 spilling out of our cities and factories. What some have called the “throwaway society” had been based on the 62 that endless resources will allow us to produce an endless supply of goods and that bottomless receptacles – landfills and oceans dumping sites will allow us to dispose of an endless stream of waste. But now we are beginning to 63 in that stream. Having relied for too long on the old 64 “out of sight, out of mind,” we are now running out of ways to dispose of our waste in a manner that keeps it out of either sight or mind.

The American people have in recent years, become embroiled in 65 about relative merits of various waste disposal schemes, from dumping it in the ocean to burying it in a landfill to burning it or taking it elsewhere. Now, however, we must 66 a strategic threat to our 67 to dispose of the enormous quantities of waste now being produced. There is only one way out: we have to change our production 68 and reduce the amount of waste we create. Our species used to flourish within the interdependent web of life, but we have chosen to leave the garden. Unless we find a way to 69 change our way of thinking about the relationship between humankind and the earth, our children will 70 a wasteland.

Part IV Writing (30 points)

*Directions: For this part, you are to write a composition on the topic **Who Is to Take Care of the Kid?** You should write at least 400 words and you should base your composition on the outline (given in Chinese) below.*

1. 很多家庭请老人（爷爷奶奶）照看孩子
2. 老人照看孩子的好处与可能带来的问题
3. 我的观点