

# RESEARCH METHODOLOGY ASSESSMENT

## MODULE 1 PHILOSOPHY OF RESEARCH

1. The academic world is experiencing tremendous transformation in which, (EXCEPT)
  - a. education has become a commodity
  - b. professors are no longer custodian of knowledge
  - c. curriculum need to respond to market demand
  - d. degree can be bought in “pasar malam”
  - e. **university is considered as elite institution**
2. The following universities have been recognized as a research university by the government of Malaysia , (EXCEPT)
  - a. Universiti Malaya
  - b. Universiti Kebangsaan Malaysia
  - c. Universiti Putra Malaysia
  - d. **Universiti Teknologi PETRONAS**
  - e. Universiti Teknologi Malaysia
3. One would strive to earn a **higher degree** for the following reasons,
  - a. switch to a new career
  - b. gain deeper understanding
  - c. quench thirst for knowledge
  - d. command respect of family
  - e. **all the above**
4. Definition of **research** (based on Webster) is, (EXCEPT)
  - a. an investigation or experimentation
  - b. a revision of accepted theories or laws
  - c. a practical application of such new or revised theories or laws
  - d. **conducted based on trial and error basis**
  - e. quest for the discovery or interpretation of facts
5. Research conducted must take into consideration the following factors, (EXCEPT)
  - a. impact on political and social structure
  - b. improving the economic status of the people
  - c. **availability of fund**
  - d. personal interest
  - e. institutional goals
6. A **scientific research** is an investigation that is, (EXCEPT)
  - a. controlled
  - b. critical
  - c. empirical

- d. **supernatural**
  - e. systematic
7. A **scientific research** assumes that
- a. nature is chaotic
  - b. truth is absolute
  - c. **perception is based on sense**
  - d. behavior is random
  - e. everything is self evidence
8. A **high quality research** would have the following characteristics, (EXCEPT)
- a. based on work by others
  - b. incremental improvement
  - c. based on logical rationale
  - d. **known as never been done before**
  - e. tied to known theory
9. Understanding the appropriate **research method** is important for researchers because,
- a. **appropriate method can be selected for investigation technique**
  - b. methods used should differ from others
  - c. ensure that the technique chosen will never be repeated
  - d. selection of method is difficult to predict
  - e. research is much depend on individual creativity
10. The following are critical steps in the **cycle of research process** (EXCEPT)
- a. Conduct experiments or collect data
  - b. Identifying appropriate methods
  - c. **Patent filing**
  - d. Problem identification
  - e. Stating thesis statement
11. **Problem formulation** is expected to be (EXCEPT)
- a. **the easiest aspect of research**
  - b. addressing real problem
  - c. somewhat vague and poorly defined
  - d. need to cover every angle
  - e. require narrowing down the scope
12. Identifying the appropriate **research question** is difficult because, (EXCEPT)
- a. at the start of a research a general questions will need to be trimmed to be more specific at the end
  - b. industrial problem will not always be immediately suitable for research
  - c. research questions will need to be reviewed throughout the research cycle
  - d. the research direction need to be clearly focused and specific
  - e. **very limited information can be obtained from the literature to guide formation of the research**

13. **Literature review** will be useful in, (EXCEPT)
- a. Benchmarking against other research approaches
  - b. Finding appropriate techniques to apply
  - c. **Preparing the final report using reported results**
  - d. Identifying appropriate area of focus
  - e. Validating research method chosen
14. The following are techniques classified as **qualitative research** techniques, (EXCEPT)
- a. case study
  - b. focus group
  - c. field work
  - d. **simulation**
  - e. survey method
15. The following are techniques classified as **quantitative research** techniques, (EXCEPT)
- a. pilot
  - b. modeling
  - c. experiment
  - d. simulation
  - e. **interview**
16. The **research journey** will probably take a researcher through the following valleys, (EXCEPT)
- a. canyon of despair
  - b. fundless desert
  - c. jungle of data
  - d. peak of confusion
  - e. **mirror of certainty**
17. The **research design** must take into consideration the following factors, (EXCEPT)
- a. research discipline
  - b. **expected result**
  - c. required data collection
  - d. problem statement
  - e. statement of thesis
18. The **final report** is expected to include the following content,
- a. research objectives
  - b. citation to relevant literature
  - c. results of study
  - d. abstract
  - e. **all the above**

19. **Plagiarism** is considered as a serious issue because
- a. everybody talks about it
  - b. it degrades research ethics**
  - c. common among researcher
  - d. difficult to detect
  - e. is not an offense
20. Completing **postgraduate program** will be beneficial to you because it, (EXCEPT)
- a. enhance your technical knowledge
  - b. guarantee better salary**
  - c. increase competitiveness level
  - d. is a certification of achievement
  - e. is a personal challenge

## Module 2\_1.Questions

1. What is a peer review?
  - a. Evaluation of work done by one's superiors.
  - b. Evaluation of work by those having similar competence.**
  - c. Evaluation of work done by one's subordinates.
  - d. A show at the end of a peer.
2. What is a research question?
  - a. Your work intends to answer the question.**
  - b. Any question that relates to research.
  - c. A question that a graduate student might have.
  - d. A question in a paper which you are going to answer in the next sentence.
3. What is the defence of a research proposal?
  - a. Checking a research proposal for plagiarism in TurnItIn.
  - b. The documents and forms in the research proposal.
  - c. Your dissertation.
  - d. A written document and a presentation made by you.**
4. Which answer is TRUE?
  - a. The literature review is not my contribution to the field.
  - b. The literature review is my contribution to the field.
  - c. The literature review is just a list of what others have done.
  - d. The literature review is part of my contribution to the field.**
5. What is academic enquiry?
  - a. Asking a question to an academic.
  - b. A viva voce exam.
  - c. Looking into a topic so that you can understand it or discover new things about it.**
  - d. A disciplinary panel that looks into possible wrongdoings of researchers.
6. Which answer is TRUE?
  - a. Research improves one's writing skills only in the area one is writing about.
  - b. Research does not improve one's writing skills.
  - c. Research improves one's writing skills.**
  - d. Research improves one's general writing skills but not one's writing skills in the area that one is writing about.
7. What is meant by existing theory?
  - a. Novel theoretical insight.
  - b. Critique.
  - c. A conceptual framework.
  - d. The state of the art.**

8. What is meant by setting the scene?
- a. Arranging the room in which you give a presentation.
  - b. Outlining what you are going to talk/write about.**
  - c. Using the whiteboard.
  - d. Arranging the table before a meal.
9. Which answer is TRUE?
- a. I can only write a literature review by describing the work of researcher A, then researcher B, etc.
  - b. I can only write a literature review by describing things chronologically.
  - c. I have a lot of flexibility in the way I write a literature review – organized by researcher, or chronologically, or etc.**
  - d. I start the literature review with what the topic is like today and then I go back in history.
10. What is the purpose of having a theme(s) in your literature review?
- a. It makes the work cogent.
  - b. It stops the threads from being tangled
  - c. It makes the work cohesive.**
  - d. It is to do with formatting.
11. Which answer is TRUE?
- a. A literature review should only be a sort of list.
  - b. I will know the value of a paper because the paper will tell me.
  - c. I will know the value of a paper because other authors will tell me.
  - d. I will have to evaluate each paper.**
12. What is a gap in the literature?
- a. It is a paper that I cannot seem to get access to.
  - b. It means that there is an absence of work done on a part of the topic.**
  - c. It is when a database, such as Scopus, has a few years of a publication missing.
  - d. It means the 'holes' in my literature review that I need to fill.
13. What is a 'line of argument'?
- a. A path that you must not cross.
  - b. An argument expressed in such a way that it could be misleading.
  - c. The views that you have on the topic.**
  - d. The detail of what you write.
14. If my literature review is incomplete then ...
- a. I will not understand the topic.
  - b. I will not be able to explain the topic.
  - c. It will not really affect my own research.

**d. Both a and b.**

15. Assume that you have worked on your topic before coming to UTP. Which of these do you do?

- a. I should not mention the previous work.
- b. I should pretend that I have not done previous work, in order to make me look good.
- c. I should mention the work, the name of the institution where I did it, and any other bodies that I collaborated with.**
- d. I should mention the work and simply name the institution where I did it.

16. What is a study plan?

- a. An image.
- b. A roadmap to prepare for your research.**
- c. Describes how I am going to work – getting up early, short intense study periods, lots of work.
- d. A list of all the things that I need to do between now and the end of my research.

17. What is a Gantt chart?

- a. It is the same as a PERT chart.
- b. It helps me to collaborate with others.
- c. A bar chart that shows your schedule.**
- d. It is a useful chart but unfortunately there is no software that will help me draw one.

18. When making my Research Proposal Defence ...

- a. A need a complete list of references.
- b. A need some references.
- c. I do not need a reference list at this stage.
- d. I need some references, including some key ones.**

19. What is a direct statement?

- a. A statement that is spoken.
- b. One with numeric independent variables.
- c. One that is quantitative rather than qualitative.
- d. A statement that does not leave the reader reading between the lines.**

20. Which one of these is in the passive voice?

- a. It was agreed that the experiment should be ...**
- b. The research officer designed the experiment.
- c. Something/someone had broken the water pipe in three places.
- d. I am going to pass my higher degree.

## Assessment 1 Jan 2015 Semester

### Chapter 3 (Q31-Q40)

For questions 31 – 36, state the **most suitable** method of data collection that you would use to collect data for each study.

- |                        |                 |
|------------------------|-----------------|
| A. experiment          | B. observation  |
| C. mail survey         | D. group survey |
| E. telephone interview |                 |

21. Collecting data on the percentage of patients at a particular hospital who were admitted for dengue fever in the year 2014. **Answer: (B)**
22. A study to compare the effectiveness of a new test drug versus a standard one in lowering blood pressure **Answer: (A)**
23. A cohort study of selected individuals over time to see who developed diabetes over the study period **Answer: (B)**
24. Collecting additional information on candidates that applied for a position in a company. **Answer: (E)**
25. Collecting data on the potential marketability of a brand of shampoo by interviewing a group of expert market researchers.  
**Answer: (D)**
26. A study on the socio economic status (income level, expenditure level, etc.) of people living within 500 kilometers of your home. The study requires the responses to 100 questions for every person. **Answer: (C)**

For questions 37 – 40, state the **sampling technique** used in the study.

- |                        |                  |
|------------------------|------------------|
| A. systematic          | B. simple random |
| C. stratified sampling | D. cluster       |
| E. convenience         |                  |

27. Using random digit dialing, researchers asks 1005 Malaysian adults their plans on working during retirement.  
**Answer: (B)**



28. A study on attitudes about smoking is conducted at a college. The students are divided by year (first, second, third, fourth). Then a random sample is selected from each class and interviewed.

**Answer: (C)**

29. For quality assurance, every tenth machine part is selected from an assembly line and measured for accuracy.

**Answer: (A)**

30. A pregnancy study in Cebu, Philippines randomly selects 33 communities from the Cebu metropolitan area, and then interviews all available pregnant women in these communities.

**Answer: (D)**

### **Chapter 3 (Q15-Q24)**

For questions 15 – 24, state the most suitable method of data collection that you would use to collect data for each study.

- |                        |                 |
|------------------------|-----------------|
| a. experiment          | b. observation  |
| c. mail survey         | d. group survey |
| e. telephone interview |                 |

1. Collecting data on the percentage of patients in a hospital who were admitted for dengue fever. **(B)**
2. A study on the effectiveness of a new test drug in lowering blood pressure. **(A)**
3. A cohort study of selected individuals over time to see who developed diabetes over the study period. **(B)**
4. Collecting additional information on candidates that applied for a position in a company. **(E)**
5. Collecting data on customer satisfaction with the service provided by a major airline. **(D)**
6. A study on the socio economic status (income level, expenditure level, etc.) of people living within 500 kilometers of your home. **(C)**

For questions 21 – 24, state the sampling technique used in the study.

- |                        |                  |
|------------------------|------------------|
| a. systematic          | b. simple random |
| c. stratified sampling | d. cluster       |
| e. convenience         |                  |

7. Using random digit dialing, researchers asks 1005 Malaysian adults their plans on working during retirement. **(B)**
8. A study on attitudes about smoking is conducted at a college. The students are divided by year (first, second, third, fourth). Then a random sample is selected from each class and interviewed. **(C)**
9. For quality assurance, every tenth machine part is selected from an assembly line and measured for accuracy. **(A)**

10. A pregnancy study in Cebu, Philippines randomly selects 33 communities from the Cebu metropolitan area, and then interviews all available pregnant women in these communities. **(D)**

### **SECTION A MULTIPLE CHOICE QUESTIONS**

For questions 1 – 6, state the **most suitable** method of data collection that you would use to collect data for each study.

- |                        |                           |
|------------------------|---------------------------|
| a. experiment          | b. observation            |
| c. mail survey         | d. face-to-face interview |
| e. telephone interview | f. group survey           |

1. Collecting data on the percentage of motorbike riders who wear helmets.
2. A study on the effect of eating oatmeal on lowering blood pressure
3. A study on how Standard 4 students solve a puzzle
4. Collecting data on the price of regular unleaded petrol at petrol stations in Perak
5. Collecting data on customer satisfaction with the service provided by a major airline.
6. A study on the ages of people living within 500 kilometers of your home.

For questions 7 – 10, state the sampling technique used in the study.

- |                        |                  |
|------------------------|------------------|
| a. systematic          | b. simple random |
| c. stratified sampling | d. cluster       |
| e. convenience         |                  |

7. Using random digit dialing, researchers asks 1005 Malaysian adults their plans on working during retirement.
8. A study on attitudes about smoking is conducted at a college. The students are divided by year (first, second, third, fourth). Then a random sample is selected from each class and interviewed.
9. For quality assurance, every tenth machine part is selected from an assembly line and measured for accuracy.

10. A pregnancy study in Cebu, Philippines randomly selects 33 communities from the Cebu metropolitan area, and then interviews all available pregnant women in these communities.

## SECTION B

1. Suppose a survey is conducted using a telephone survey method. The survey is conducted from 9 A.M. to 11 A.M. Indicate what potential problems the data collectors might encounter.
2. A company wants to test the effectiveness of a new gum developed to help people give to up smoking. The company identifies ten adults who are heavy smokers. Five of the subjects are given the new gum and the other five are given a placebo. After two months, the subjects are evaluated and it is found that the five subjects using the new gum have quit smoking. Identify a potential problem with the given experimental design and suggest a way to improve it..

## ANSWER SCHEME

### SECTION A MULTIPLE CHOICE QUESTIONS

For questions 1 – 6, state the **most suitable** method of data collection that you would use to collect data for each study.

- |                        |                           |
|------------------------|---------------------------|
| A. experiment          | B. observation            |
| C. mail survey         | D. face-to-face interview |
| E. telephone interview | F. group survey           |

1. Collecting data on the percentage of motorbike riders who wear helmets.  
**Answer: (B)**
2. A study on the effect of eating oatmeal on lowering blood pressure  
**Answer: (A)**
3. A study on how Standard 4 students solve a puzzle  
**Answer: (B)**
4. Collecting data on the price of regular unleaded petrol at petrol stations in Perak  
**Answer: (E)**
5. Collecting data on customer satisfaction with the service provided by a major airline.  
**Answer: (F)**
6. A study on the ages of people living within 500 kilometers of your home.  
**Answer: (C)**

For questions 7 – 10, state the sampling technique used in the study.

- |                        |                  |
|------------------------|------------------|
| A. systematic          | B. simple random |
| C. stratified sampling | D. cluster       |
| E. convenience         |                  |

7. Using random digit dialing, researchers asks 1005 Malaysian adults their plans on working during retirement.

**Answer: (B)**

8. A study on attitudes about smoking is conducted at a college. The students are divided by year (first, second, third, fourth). Then a random sample is selected from each class and interviewed.

**Answer: (C)**

9. For quality assurance, every tenth machine part is selected from an assembly line and measured for accuracy.

**Answer: (A)**

10. A pregnancy study in Cebu, Philippines randomly selects 33 communities from the Cebu metropolitan area, and then interviews all available pregnant women in these communities.

**Answer: (D)**

## SECTION B

1. Suppose a survey is conducted using a telephone survey method. The survey is conducted from 9 A.M. to 11 A.M. Indicate **THREE (3)** potential problems the data collectors might encounter.

**Answer:**

- **Lost connection**
- **Limited time**
- **Interviewee could put the phone down and refuse to answer.**
- **Respondent not available when call is made**

2. A company wants to test the effectiveness of a new gum developed to help people give up smoking. The company identifies ten adults who are heavy smokers. Five of the subjects are given the new gum and the other five are given a placebo. After two months, the subjects are evaluated and it is found that the five subjects using the new gum have quit smoking. Identify a potential problem with the given experimental design and suggest a way to improve it..

**Answer:**

- **Sample size is not representative**
- **Experiment should be replicated using a bigger sample size.**

## Assessment 2 Jan 2015 Semester

### Chapter 4 (Q1-Q15)

1. The main concept behind doing research is to...
  - A. study and explore knowledge.
  - B. start with a predefined and clear cut objectives.
  - C. get new ideas.**
  - D. define clear objectives.
2. In order to begin research, one must...
  - A. start with a number of clear goal.
  - B. start with a number of predetermined objectives.**
  - C. have a well-defined research method.
  - D. solve the research problem.
3. Doing research requires drafting a working outline, which is...
  - A. having a predetermined and clear cut objective(s).
  - B. planning to get answers for what, why and how type of questions.**
  - C. having a clear idea about the research problem solutions.
  - D. none of the above.
4. Research aims for finding “answers” to “questions”. It implies...
  - A. a framework of philosophies.
  - B. using valid and reliable methods and techniques.
  - C. an unbiased design.
  - D. all the above.**
5. Which management tool is suitable for establishing linkages between research activities?
  - A. Mind Map.**
  - B. Drill Down.
  - C. Gantt Charts.
  - D. Risk Analysis.
6. You are studying the effect of drinking carbonated beverage on pregnant women and their babies. The research only covers Coca Cola and Pepsi. This defines the:
  - A. scope of the study.**
  - B. methodology of the study.
  - C. conclusion of the study.
  - D. risk of the study.
7. Which of the following constitutes a source of risk in research?
  - A. Access to library facilities.
  - B. Discover that someone has already done the research.**
  - C. Available time to complete the study.

- D. Availability of necessary equipment to conduct the research.
8. When having a meeting with the supervisor, a student should...
- A. discuss results and interpretations.
  - B. propose new research directions based on results, if needed.
  - C. highlight obstacles in conducting research.
  - D. **All of the above.**
9. Which of the following is NOT a supervisor's role:
- A. Help in setting the goal and objectives of research.
  - B. **Conduct literature search to formulate the research problem.**
  - C. Assess research progress and give feedback.
  - D. Discuss research outcomes.
10. In order to complete your research timely, you...
- A. should not take breaks from work for recreational activities.
  - B. finish all experiments required for the research before data analysis and results writing.
  - C. strictly follow a 9 to 5 work schedule.
  - D. **None of the above.**
31. What is a simple definition of a project?
- A. Involve cost and time
  - B. **Has a clear and specific objective**
  - C. Infinity and unbound
  - D. Big task broken down into smaller tasks
32. The following are possible constraints of a project, EXCEPT
- A. The scope of a project unclear
  - B. Difficult to have a meeting with supervisor
  - C. Not enough money to buy materials
  - D. **Equipment breakdown**
33. In a Brent Spar project (oil and gas project), Shell failed to identify Greenpeace movement until the project was beyond saving. What category did Greenpeace belong to?
- A. Project scope
  - B. Project risks
  - C. **Project stakeholders**
  - D. Project tasks
34. The following are project management tools, EXCEPT
- a. Drill Down
  - b. **Rules and Regulations**
  - c. Risk Analysis
  - d. Gantt Charts



35. Which management tool can be used to identify all tasks associated with a project?
- a. Gantt Charts
  - b. Drill Down**
  - c. Risk Analysis
  - d. Mind Map

## **RESEARCH METHODOLOGY ASSESSMENT**

### **MODULE 4 RESEARCH MANAGEMENT**

**Please answer ALL questions in this booklet**

1. The main concept behind doing research is to...
  - A. study and explore knowledge.
  - B. start with a predefined and clear cut objectives.
  - C. get new ideas.**
  - D. define clear objectives.
  
2. In order to begin research, one must...
  - A. start with a number of clear goal.
  - B. star with a number of predetermined objectives.**
  - C. have a well defined research method.
  - D. solve the research problem.
  
3. Doing research requires drafting a working outline, which is...
  - A. having a predetermined and clear cut objective(s).
  - B. planning to get answers for what, why and where type of questions.**
  - C. having a clear idea about the research problem solutions.
  - D. none of the above.
  
4. Research objective falls into a number of categories that include...
  - A. planning to get answers for what, why and where type of questions.
  - B. considering the logical behind the methods we use in the context of the research
  - C. formulative, concept, and planning for research methods.
  - D. exploratory, descriptive and experimentation research.**

5. Formulative research studies is a category of research that aims to...
- A. **achieve new insights of a concept.**
  - B. analyze characteristics of something.
  - C. determine the frequency with which something occurs.
  - D. test the relationship between variables.

6. Research is considered to be more than just a way of skills, it is...
  - A. planning to what, why and where type of questions to determine a goal.
  - B. a way of critical thinking about professional aspects of related to your work.**
  - C. the research methods used within the research methodology.
  - D. discovering the relationship between variables.
  
7. Research aims for finding “answers” to “question”. It implies...
  - A. a framework of philosophies.
  - B. using valid and reliable methods and techniques.
  - C. an unbiased design.
  - D. all the above.**
  
8. Research philosophies refer to...
  - A. approaches and the discipline.**
  - B. correct procedures in the discipline.
  - C. ideas to discover.
  - D. objectives to consider in the research process.
  
9. In order to make research reliable, it requires that...
  - A. there is no deliberate attempt to either to conceal or highlight something.
  - B. quantitative and qualitative methods are to be used.
  - C. repeatability and accuracy are provided for the quality of measurement procedures used.**
  - D. the solution to the research problem is known in advance.
  
10. In order to make research unbiased, it requires that...
  - A. there is no deliberate attempt to either to conceal or highlight something.**
  - B. qualitative and quantitative methods are to be used.
  - C. repeatability and accuracy are provided for the quality of measurement procedures used.
  - D. the solution to the research problem is known in advance.
  
36. What is a simple definition of a project?
  - E. Involve cost and time
  - F. Has a clear and specific objective**
  - G. Infinity and unbound
  - H. Big task broken down into smaller tasks

37. The following are possible constraints of a project, EXCEPT
- E. The scope of a project unclear
  - F. Difficult to have a meeting with supervisor
  - G. Not enough money to buy materials
  - H. Equipment breakdown**
38. In a Brent Spar project (oil and gas project), Shell failed to identify Greenpeace movement until the project was beyond saving. What category Greenpeace belonged to?
- E. Project scope
  - F. Project risks
  - G. Project stakeholders**
  - H. Project tasks
39. The following are project management tools, EXCEPT
- a. Drill down
  - b. Rules and regulations**
  - c. Risk analysis
  - d. Gantt charts
40. Which management tools can be used to identify all tasks associated with a project?
- a. Gantt charts
  - b. Drill down**
  - c. Risk analysis
  - d. Mind map
41. Which of the following constitutes source of risk in research?
- a. The scope of a project unclear
  - b. Difficult to have a meeting with supervisor
  - c. Not enough money to buy materials
  - d. Equipment breakdown**
42. Gantt charts are useful tools for analyzing and planning more complex projects. They...
- a. Will tell you when to meet your supervisor
  - b. Allow you to collect data correctly
  - c. Allow you to plan the allocation of resources needed to complete the project**
  - d. Will tell you which equipment is broken

43. Good time management leads to the following, EXCEPT
- a. Help in prioritizing the work
  - b. Increase productivity
  - c. **Expected experimental results**
  - d. Reduce stress
44. The following are potential time wasters, EXCEPT
- a. Disorganisation
  - b. **Guest speakers**
  - c. Displacement
  - d. Perfection
45. What you should present during regular meeting with you supervisor?
- a. Machines that broke down
  - b. Materials delivery
  - c. **Results and their interpretation**
  - d. Visitors to your laboratory

ANSWERS:

1.	C
2.	B
3.	B
4.	D
5.	A
6.	B
7.	D
8.	A
9.	C
10.	A

11.	B
12.	D
13.	C
14.	B
15.	B
16.	A
17.	C
18.	C
19.	B
20.	C

Assessment 2 Jan 2015 Semester

Chapter 5 (Q16-Q30)

1. Choose the CORRECT statement about hazard and risk
  - A. Hazard is the uncontrolled harm that results from risks
  - B. Hazard reflects the probability of harm and risk is the outcome
  - C. Hazard causes harm if not controlled and risk is the probability of the outcome**
  - D. Hazard causes serious harm to life and risk is the outcome of that hazard
2. A corrosive chemical is
  - A. able to kill living things
  - B. able to burn skin**
  - C. unstable in the presence of water
  - D. able to release toxic fumes
3. In the event of a fire, where do heat and smoke go?
  - A. To the lowest point in the room
  - B. To the middle point of the room
  - C. To the highest point of the room**
  - D. To the coldest point of the room
4. What type of fire extinguisher is designed for fire from electrical equipment?

- A. Fire extinguisher of Class A
  - B. Fire extinguisher of Class B
  - C. Fire extinguisher of Class C**
  - D. Fire extinguisher of Class A and Class C
5. Which of the following procedures of firefighting is incorrect?
- A. Walk away as soon as the fire is out
  - B. For a relatively big fire, use several extinguishers at the same time
  - C. Approach fire from upwind**
  - D. Aim nozzle at the base of flame
6. All portable fire extinguishers in use today are operated in the upright position. To operate the fire extinguisher, the acronym P.A.S.S. is often used to help us to remember to:
- A. Pass by the fire, activate the fire alarm, select the proper extinguisher, shoot at the base of the fire.
  - B. Pull the pin, aim at the base of the fire, squeeze the handle, and sweep at the base of the fire.**
  - C. Pull the alarm, alert the response team, shut down the power sources, secure the area.
  - D. Pass by the fire, activate the sprinkler system, seal fire area from oxygen, stop unauthorized entry.
7. Which of the following are the primary causes of falls?
- I. A failure of anti-fatigue mat
  - II. A design flaw in the walking surface
  - III. A poorly fitted safety sign
  - IV. An individual's impaired physical condition
- A. I, and III
  - B. II, and IV**
  - C. III and IV
  - D. I and II
8. Which of the following PPEs are to protect against falling and/or accelerating objects?
- A. Hard hats, safety goggles, safety boots

- B. Hard hats, face shields, safety boots
  - C. Hard hats, face shields, safety goggles
  - D. Hard hats, face shields, safety goggles, safety boot**
9. A storage tank containing petrol has caught fire. Which of the following media should you **NOT** use to put out the fire?
- A. Carbon dioxide
  - B. Dry chemical
  - C. Water**
  - D. Dry powder

Questions 10-12 refer to the **1984 Bhopal Industrial Disaster** in India.

10. The industrial disaster occurred in a
- A. oil and gas industry
  - B. pesticide plant**
  - C. food and beverage company
  - D. fertilizer plant
11. This disaster is a world known case study in safety because
- I. it affected millions of lives
  - II. it affected a globally well-known company
  - III. the safety measures that was not practiced
  - IV. the hazardous gas that was released
- A. I, II and III
  - B. I and III**
  - C. I, II and IV
  - D. IV only



12. Based on your understanding of the case, which of the statement below do you agree with?
- A. The disaster could have affected less lives if the chemical used were not hazardous
  - B. The disaster could have been avoided if the employees followed safety measures
  - C. The disaster could have been much worse if the company had no safety system
  - D. The disaster could have been avoided if the employers practiced safety measures**
13. Which one of the following actions is IMPORTANT to do before giving first aid?
- A. Ensure victim is breathing
  - B. Check for danger**
  - C. Ensure victim gives permission
  - D. Tilt victims head before giving breaths
14. What is the function of ergonomic science?
- A. It puts people first, taking into account their capabilities and limitations**
  - B. It is a study on non-human contact technology
  - C. It changes process technology, product design, market drive.
  - D. It fits the people to the working environment and tools
15. Based on your understanding of HSE, which of the statement below is the **MOST** correct?
- A. It is important to be aware of risk and hazards
  - B. Safety must be a priority at all times**
  - C. Safety covers all aspects of our daily life
  - D. It is important to have awareness of safety

## Module 5 [Dr. Azizul]

Which is the most effective method of reducing contamination to workers?

- A. PPE
- B. Administration controls
- C. Fans
- D. Engineering controls**

Which analysis method is the most effective at determining potential problems in experimental activities?

- A. Preliminary Hazard Analysis
- B. Job Safety Analysis**
- C. Fault Tree Analysis
- D. Failure Mode Effect Analysis

Which of the following is a step in Job Safety Analysis?

- A. B. Define the steps or tasks to do the job.
- B. Define the hazards associated with each task.
- C. Make recommendations to minimize or eliminate the hazard.
- D. All of the above**

What are the two main causes of incidents in the workplace?

- A. Unsafe acts and unsafe people
- B. Unsafe people and unsafe machines
- C. Unsafe conditions and unsafe machines
- D. Unsafe acts and unsafe conditions**

A hazard analysis can be used to evaluate a potential hazard; what other information should be considered?

- A. Injury reports
- B. Statistical data
- C. Risk assessment**
- D. Fatality investigations

The philosophy and guiding principles for occupational safety and health regulations stated that the

- A. protection of life and health at work is a workers' responsibilities
- B. responsibilities to ensure safety and health at workplaces lies with those who create the risk and with those who work with the risk**
- C. responsibilities to ensure safety and health awareness at workplace workers lies with the employer
- D. prevention of accidents at workplace is the responsibility of the health and safety department

## RESEARCH METHODOLOGY


### HSE ASSESMENT

#### TOPIC: Workplace Hazard

1. Which of the following statements is **NOT TRUE** about electrical hazard?
  - E. The severity of an electrical shock depends on the magnitude of the current flow through the human body
  - F. The severity of an electrical shock depends on the path of the current flow through the human body
  - ~~G.~~ The severity of an electrical shock varies somewhat with the age, sex and physical condition of the victim
  - H. The severity of an electrical shock depends on the value of the applied voltage
2. Which of the following is the most important factor in deciding the severity of a burn?
  - E. Age of victim
  - F. Depth to which the burn penetrates
  - G. Location of the burn
  - H. Amount of burnt area
3. In the event of a fire, where do heat and smoke go?
  - E. To the lowest point in the room
  - F. To the middle point of the room
  - G. To the highest point of the room
  - H. To the coldest point of the room
4. What type of fire extinguisher is designed for fire from flammable liquids?
  - E. Fire extinguisher of Class A
  - F. Fire extinguisher of Class B
  - G. Fire extinguisher of Class C
  - H. Fire extinguisher of Class A and Class C
5. Which of the following procedures of fire fighting is incorrect?
  - E. Walk away as soon as the fire is out
  - F. For a relatively big fire, use several extinguishers at the same time
  - G. Approach fire from upwind
  - H. Aim nozzle at the base of flame

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  - VII. A poorly fitted safety sign
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  - G. Hard hats, face shields, safety goggles
  - H. Hard hats, face shields, safety goggles, safety boot
9. A storage tank containing petrol has caught fire. Which of the following media should you **NOT** use to put out the fire?
- E. Carbon dioxide
  - F. Dry chemical
  - G. Water
  - H. Dry powder
10. In the event of an uncontrolled fire in your facility, your first course of action should be to:
- A. get a fire extinguisher.
  - B. run out of the building.
  - C. activate the fire alarm.
  - D. ask your boss what to do.
11. The fire triangle consists of all of the following except?
- A. oxygen.
  - B. fuel.

- C. heat.
  - D. chemical chain reaction
12. Water is most effective and most commonly used for which of the following type of fire
- A. Class A-ordinary combustibles
  - B. Class B-flammable and combustible liquids
  - C. Class C-electrical
  - D. Class D-combustible metals
13. What are the THREE (3) elements required to start and sustain fire?
- A. Heat, Fuel and Air
  - B. Fuel, Reactant and Heat
  - C. Heat, Smoke and Oxygen
  - D. Oxygen, Nitrogen and Fire
14. Which of the following is NOT likely a cause of musculo-skeletal disorders?
- A. Extreme cold
  - B. Stress and anxiety
  - C. Prolonged standing
  - D. None of the above
15. What need to be done first when a person gets an electrical shock?
- A. Pull him away from the source
  - B. Switch off the source
  - C. Perform First Aid
  - D. Touch the person to make sure he/she is still alive
16. MOST occupational injuries are caused by
- A. unsafe conditions.
  - B. unsafe acts/practices.
  - C. uncomfortable workplace.
  - D. ineffective supervision.
17. Which of the following statements describe the best position in placing a computer monitor?
- A. A user has to lean forward to clearly see the text
  - B. A user can see overhead lights reflected on the screen
  - C. A user can clearly read the text without twisting his neck
  - D. A user can clearly read the text by looking far upwards

18. One risk factor that determines if repetition contributed to a Musculoskeletal Disorder is
- A. speed of movement
  - B. variation of types of activities
  - C. gender of person who is carrying out the activity
  - D. workplace environment
19. Which of the following is **NOT** an air pollutant?
- A. Radioactive substances 
  - B. Cinders
  - C. Mist
  - D. Soil
20. Which of the following statements **DOES NOT** reflect a good practice towards air quality management?
- A. Driving alone into cities during peak hours.
  - B. Structural planning of township, residential and industrial area.
  - C. Park cars at the edge of city and use public transport.
  - D. Companies encourage car pooling among employees

## RESEARCH ETHICS AND INTELLECTUAL PROPERTY RIGHTS

46. **Intellectual Property (IP)** may refer to the following, **EXCEPT**
- a. New Invention
  - b. Artistic Creation
  - c. Geographical Indication
  - d. New Ideas
  - e. New Product
47. The following IPs may be **protected** under the Malaysian Laws, **EXCEPT**
- a. Trademarks
  - b. Copyrights
  - c. Trade Secret
  - d. Circuit Design
  - e. Industrial Design
48. For a product to be **patented**, it must comply to the following conditions, **EXCEPT**
- a. New
  - b. Invention
  - c. Ideas
  - d. Inventive Steps
  - e. Industrially Applicable
49. **Prior Arts**, in the context of IP management means

- a. new drawing that may be considered as a masterpiece
- b. anything that has been disclosed to public**
- c. ideas generated by someone else that do not belong to the group
- d. musical score/arrangement that has been compiled into album
- e. screenplay script that has become a blockbuster

50. The following steps are expected to be completed before a patent right is finally granted, EXCEPT

- a. novelty search
- b. patent specification
- c. patent agreement**
- d. patent filing
- e. patent examination

51. The following are **non-patentable** subject, EXCEPT

- a. *plant species*
- b. *biological process*
- c. *business methods*
- d. *medical treatment*
- e. *silly invention***

52. **Utility Invention**, in the context of patent protection, refers to
- a. **innovation or improvement of an existing product**
  - b. industrial design that improves efficiency
  - c. creative ideas in product design
  - d. tools to assist rapid prototyping
  - e. software for machine design
53. The following IPs may be protected under the **Copyright** Laws, EXCEPT
- a. Photos
  - b. Script
  - c. **Secret Recipe**
  - d. Painting
  - e. Music
54. *You may obtain protection under the **Copyright** Laws, for*
- a. *ideas*
  - b. *procedure*
  - c. ***note***
  - d. *formula*
  - e. *method*
55. Registered Copyright grant the author exclusive right to the creation for the duration of
- a. 10 years
  - b. 20 years
  - c. 50 years
  - d. life
  - e. **life plus 50 years**
56. The following are principles of **responsible research** EXCEPT
- a. Honesty
  - b. Integrity
  - c. **Love**
  - d. Respect
  - e. Responsible
57. Responsible **researchers** are expected to behave in the following manner, EXCEPT
- a. Respect the rights of people involved
  - b. Manage conflict of interest
  - c. Follow good practices and safety procedure
  - d. Cite proper authority and references
  - e. **Claim all finding as original**
58. The common **ethical issues** arising from research includes, (EXCEPT)
- a. Authorship and author order



- b. Anticipated results
  - c. Conflict of interest
  - d. Misrepresentation of results
  - e. **Mistake in experiments**
59. UTP publication policy guideline states that **authorship**, is granted based on substantial contribution in the following steps, (EXCEPT)
- a. Conceptual and design of experiments
  - b. Collection and analysis of data
  - c. **Approval of research funding**
  - d. Preparation and correction of draft manuscript
  - e. Approval for final manuscript and copyright transfer
60. **Authorship** should not be granted solely based on the following, (EXCEPT)
- a. graduate supervision
  - b. approval of fund
  - c. family member
  - d. immediate superior
  - e. **preparation of document**
61. Author **order** should be decided based on,
- a. alphabetical
  - b. authority
  - c. **contribution**
  - d. policy
  - e. seniority
62. To avoid **inadvertent plagiarism**, the following steps would be useful, (EXCEPT)
- a. Careful in paraphrasing
  - b. Clearly indicate citations and quotations
  - c. Cite sources for ideas
  - d. **Plea ignorance or innocent intentions**
  - e. Redraw all figures and tables
63. Academic **misconduct** may include the following, (EXCEPT)
- a. **Presenting the data in graphical forms for better readability**
  - b. Borrowing ideas from others without proper acknowledgements
  - c. Copying passages from reference to be part of literature review
  - d. Dropping results that does not seems to fit the expectation
  - e. Presenting work that is completed elsewhere as own work

64. Research **ethics committee** of any institutions would be expected to be responsible for the following, (EXCEPT)
- a. Deliberate and decide on cases referred
  - b. Establish and promote ethics policy
  - c. **Liable for unethical or misconduct of researcher**
  - d. Propose and monitor training program
  - e. Review and approve application requiring ethical review
65. Research that involve human and other life subject is expected to, (EXCEPT)
- a. present and obtain permission to proceed from research ethics committee
  - b. establish procedure to protect the privacy and safety of subject
  - c. obtain informed consent (in writing or verbal) from subject
  - d. **pay compensation in lieu of hardship endured**
  - e. submit compliance report to approving authority