TAW12 1/3
ABAP Workbench Concepts

1   What would happen if the public components of a class were changed

               private components will also need to be changed
               Inheritance becomes invalidated
               Nothing. The class maintains it's own status
✓   Outside Users may have to make changes to to
               their components to reflect the changes

2   Select the answers that apply to static methods and instance methods

(More than one answer is correct)

✓   Static methods MUST be addressed by class_name
               even when object is instantiated
               Instance methods MUST be addressed by class
               name
               Static methods MUST be addressed by object
               reference after instantiation
✓   Instance methods MUST be addressed by object
               ref after instantiation

3   Identify the statement about Global Classes that is NOT true

               Class Builder can be used to test global classes
               A method to be transported is identified in
               transport organiser as LIMU METH
               Global classes are stored in TADIR with key
               R3TR CLAS
✓   Programs that are available to Global Classes must
               be associated in Class Builder
               Access to a global class is done as a reference
               variable using TYPE REF TO

4   In the context of relationship between Super and Sub classes, identify the
statements which apply

(More than one answer is correct)

A superclass is a specialization of a subclass
✓ Superclass does not know its subclasses
✓ A subclass is a specialization of a superclass
A change in a superclass does not automatically get realized in the subclass
Subclass does not know it s superclass

5   When redefining methods in a subclass, what is allowed ?

(More than one answer is correct)

✓ Code can be changed
Private Static methods
Signature can be changed
✓ Only Instance methods

6   Mark the operators used to widen cast of a class

(More than one answer is correct)

=>
✓ ?=
✓ ?TO
->
=?
=

7   Constructors have special considerations. Identify the incorrect statement below.

The Constructor must defined in the Public section
✓ A class can have multiple constructors
Generally, constructor methods can not be called
Only Import and Exception Parameters are allowed

8   Identify the valid statements that will write out the Static Attributes in
     the following code

```
class lcl_course definition.

  public section.
     data: name(15) type c value 'ABAPObjects101'.
           class-data price    type p value 100.

  private section.
     data: category(10)  type C value 'Objects'.

endclass.

data: course1         type ref to lcl_course,
      course_name     type string,
      course_price    type p,
      course_category type string.
```

(More than one answer is correct)

✓	course_price = lcl_course=>price. Write course_price.
	write: price.
✓	write lcl_course=>price.
	write lcl_course->price.

9   Mark the invalid attribute definitions

```
class lcl_course definition.

 10 public section.
 20   Data: school(20)  type c,
 30         Supervisor  type string value  ADAMS ,
 40         Price(3)  type p decimals 2 value 100 READ-ONLY.
 50   types: type_category(15) type c,
 60          type_name(10)     type c.

 70   constants: write_position type i value 10.
 80   class-data: course_count type i.
 90  private section.
 100   data: category(15) type c,
 110         name(10)     type c.
 120         courseid     like mara-matnr.

endclass.
```

40,70
70,80
30,80
✓   30,120
40, 120

10   What is contained in a class that does not exist in an interface

✓   implementation
attributes
method
definition

11   A MOVE_CAST_ERROR runtime error just occurred. Identify the cause.

Super class and subclass both point to an instance of the same class type

✓   Casting a super class to a subclass when superclass does not point to an instance of the subclass type

Subclass reference variable correpsonds to the superclass reference variable

Super class method is called from the subclass

12   What is the only component that is implemented in the implementation part of a class

Object
✓   Method
Event
Attribute
Interface

13   Choose the item that is not characteristic of redefinition in the context of super/sub class inheritance.

The signature of the method must remain the same

Only instance methods can be redefined
✓ Attributes and class methods can be redefined.
Constructor methods can't be redefined

14 What is the number of superclasses that can exist for a given subclass

✓ only 1
none
only many
1 or many

15 Using example code below, choose the correct syntax for the redefined method

```
Class lcl_car definition.
Public Section.
 method calc_speed importing im_distance type ty_dist.
End Class.
```

Method calc_speed importing im_distance.
✓ Method calc_speed Redefinition.
Method calc_speed importing im_distance
Redefinition
Method calc_speed Redefinition importing
im_distance type ty_dist.

16 What component of a class guarantees its own consistency

functional methods
✓ private attributes
static methods
public attributes

17 What statement will request memory to be allocated to an object

Call Method
Create Constructor
✓ Create Object
Call Constructor

18   What items are true about Inheritance

(More than one answer is correct)

✓   Superclass public components are visible to all
                classes
✓   Superclass protected components are visible to all
                subclasses
                Superclass private components are visible only
                within the subclasses
                Superclass private components are visible to all
                subclasses

19   In object orientation, the term   USER   includes

                Attributes
✓   All of the answers are correct
                Events
                None of the answers are correct
                Methods

20   Mark the items that characterize the Methods of a Class

(More than one answer is correct)

                Only pass return codes to the calling program
✓   Can change the state of an object
                Can access only public attributes in their class
✓   Can be defined with a parameter interface
✓   Can access all attributes in their class

21   A program needs to gain access to the public attributes of class
        lcl_course. Identify the statements that are valid.

```
class lcl_course definition.

   public section.

   data:      name(15) type c value 'ABAPObjects101'.
       class-data price    type p value 100.
```

```
   private section.

   data: category(10)  type C value 'Objects'.

endclass.

data: course1        type ref to lcl_course,
      course_name     type string,
      course_price    type p,
      course_category type string.

Create Object course1.
```

(More than one answer is correct)

course_name = name
course_name = course1=>name.
course_price = lcl_course->price.
✓ course_price = lcl_course=>price.
✓ course_name = course1->name.

22   UML provides various diagram types. Mark the valid UML diagrams

(More than one answer is correct)

Composition
✓ Component
Aggregation
✓ Behavior
✓ Class

23   An inherited class :

(More than one answer is correct)

can access the inherited private components
✓ can add components over and above the superclass
can remove superclasss components
✓ can redefine the public methods of the superclass
can not access the protected components

24   Global Class cl_course has been defined using the class builder. The
      development class is ZCL. What is the key entry in the repository table
      TADIR

                    None of the answers are correct
                    R3TR cl_course
✓   R3TR CLAS cl_course
                    R3TR ZCL CLASS
                    R3TR GLOB CLASS

25   The syntax for instance method specification is

(More than one answer is correct)

                    Call method Objref=>method
✓   Call method (from within another instance
                    method)
✓   Call method Objref->method
                    Call Method->Objref

26   Identify the statements that best describe the visibility of classes

(More than one answer is correct)

                    Local Classes are available only to programs in the
                    same development class
                    Global Classes are available only from programs
                    belonging to the same development class
✓   Local Classes are available only to the program
                    where the class is defined
✓   Global classes are centrally available to all ABAP
                    programs

27   What is possible with a subclass in an inheritance relationship to the
      superclass

(More than one answer is correct)

✓   inherits all the characteristics of the superclass

✓   can provide inherited methods with new implementations (redefinition)

The subclass can remove components of the superclass

Components defined in the superclass are not present in the subclass unless they are explicitly defined in the definition of the subclass

✓   can add new components to the subclass

28   What can be said about the visibility of attributes in the following code

```
CLASS lcl_course DEFINITION.
PUBLIC SECTION.
  Data: name type string.

PRIVATE SECTION.
  Data: price type course-price.

ENDCLASS.
```

(More than one answer is correct)

✓   price is protected from outside access

            name is available to methods only inside the class

✓   price is available to methods inside the class

            name is protected from outside access

29   Mark the items that characterize some primary differences between objects and functions

(More than one answer is correct)

✓   A program can only work with a single instance of the same function group versus a program can access several instances of the same object

✓   Calling a function loads the entire function group implicitly into memory whereas instances of an object are generated explicitly when an object is created

            A program can directly access data in the function group while access to data in an object is not possible

            Functions allow multiple instances of the same data objects. Objects only allow single instances of data

30   How can a program access private attributes of an object

                        From outside the class
✓   Only by methods of the specific object itself
                        By methods of a different object within the same
                        Program
                        By methods of a different instance of the same
                        object

31   Select the term used for Classes that can implement the same method
        differently

                        casting
                        encapsulation
✓   polymorphism
                        inheritance
                        instantiation

32   What are the rules for Event parameters

        (More than one answer is correct)

                        EXPORTING Parameters for events can only be
                        passed by reference
                        Events also allow RETURNING parameters
✓   Events can only have EXPORTING parameters
✓   EXPORTING Parameters for events can only be
                        passed by value

33   Where is the visibility of class components defined

                        Class Implementation
                        Object Instance
✓   Class Definition
                        Class Methods

34   Method

_____

          lcl_basepart=>display
          lcl_basepart~display
          lcl_basepart->display
          lcl_basepart~display
          display
✓   lif_material~display

35   Identify the valid rule when calling public methods from within the class

_____

          When calling an instance method, the = > operator
          is still required
          When calling a static method, the class name is
          required
          Private methods can not call public methods
✓   When calling a static method, the class name can
          be omitted

36   What triggers an event

_____

          Call Method
✓   All answers are correct
          None of the answers are correct
          Raise Event Inside the Method
          Raise Event

37   Finish the sentence. Propogating exceptions requires
        _____.

_____

          a Cleanup Statement
          the Raising cx_class parameter as part of the
          method signature of the calling method
          a handler for the exception
✓   the Raising cx_class parameter as part of the
          method signature where the exception is raised

38   Finish the following sentence so that it is TRUE. Static Components in
       an inheritance relationship........

       (More than one answer is correct)

       ✓   exist once per roll area
                      receive their own copy of the static attribute for
                      each subclass
                      cannot be shared
       ✓   does not allow for methods to be redefined in
                      subclasses

39   Which of the following answers characterize ABAP OO events

       (More than one answer is correct)

       ✓   Classes trigger events
       ✓   Classes subscribe to events
                      Events subscribe to classes
                      Methods subscribe to classes
                      Start-of-selection is an OO event

40   Choose the short form of the method call below

```
call method rf_car->calculate_cost importing ex_size = v_size.
```

       ✓   rf_car->calculate_cost(importing ex_size = v_size
).
                      rf_car->calculate_cost importing ex_size = v_size.
                      calculate_cost(importing ex_size = v_size).
                      rf_car->calculate_cost (importing ex_size =
                      v_size).

41   Identify the Characteristics of a Final Class

                      methods cannot be explicitly designated as FINAL
                      cannot have subclasses
                      No answers are correct
                      contains final methods implicitly
       ✓   all answers are correct

42   What component provides the Point of Contact for outside users

_____

                        Instantiated Object
✓   Public Attributes
                        Method Signature
                        Private Attributes

43   In the context of polymorphism and interfaces, mark the item that is
        NOT true

_____

                        the user is protected from the actual
                        implementations
                        interfaces describe the point of contact of a class
                        a class can implement any number of interfaces
✓   interfaces contain their own implementation part

44   Identify the line that contains the valid use of the READ-ONLY additon

_____

```
class lcl_course definition.

 10 public section.
 20   Data: Price(3) type p decimals 2
                    value 100 READ-ONLY.
 30   Types: type_category(15)  type C READ-ONLY.
 40   Constants: write_position type I value 10 READ-ONLY.

 50  private section.
 60   data: category(15)        type C READ-ONLY,
 70   class-data: course_count  type I READ-ONLY.

endclass.
```

✓   20
                 40
                 50
                 30
                 60

45   Choose the correct redefinition of the superclass method in class
        lcl_super_course

```
*Super Class Definition
CLASS lcl_super_course DEFINITION.
   PUBLIC SECTION.
     METHODS: get_course_name IMPORTING im_name type string.
ENDCLASS.

*Sub Class Method ReDefinition
A
CLASS lcl_sub_course DEFINITION INHERITING
                     FROM lcl_super_course.
   PRIVATE SECTION.
     METHODS: get_course_name IMPORTING im_name type string.
ENDCLASS.

B
CLASS lcl_sub_course DEFINITION INHERITING
                     FROM lcl_super_course.
   PUBLIC SECTION.
     METHODS: get_course_name IMPORTING im_name type string.
ENDCLASS.

C
CLASS lcl_sub_course DEFINITION INHERITING
                     FROM lcl_super_course.
   PRIVATE SECTION.
      METHODS: get_course_name REDEFINITION.
ENDCLASS.

D
CLASS lcl_sub_course DEFINITION INHERITING
                     FROM lcl_super_course.
   PUBLIC SECTION.
      METHODS: get_course_name REDEFINITION.
ENDCLASS.
```

                  SubClass Definition C
                  SubClass Definition A
                  SubClass Definition B
✓   SubClass Definition D

46   Refer to the following code and indicate which statements are true

```
Data: cl_container type ref to cl_gui_custom_container,
      cl_grid     type ref to cl_gui_alv_grid.
```

(More than one answer is correct)

cl_container points to the object that communicates with the ALV grid control

✓ cl_container points to the object that communicates with the container control

cl_grid points to the object that communicates with the container control

✓ cl_grid points to the object that communicates with the ALV grid control

47   The syntax for static method specification

✓   Call method class name = >method

Call class-method

Call Method-> class name

Call method class name->method

48   Identify the ABAP OO Event signature protocols

(More than one answer is correct)

✓   Events can only have exporting Parameters

Exporting parameters can only be passed by reference

Events can only have importing Parameters

✓   Exporting parameters can only be passed by value

49   What mechanism is used to define common components of different classes in one place

Create Object

✓   Interface

Class Definition

Raise Event

50   Class A provides friendship to Class B. Class B provides friendship to Class C. Identify the valid friend relationship.

(More than one answer is correct)

	B and C are friends of A
✓	B is friend of A
	A is friend of B and C
✓	C is friend of B
	C is friend of A

51 Changing the view of an instance of a class with more details is referred to as

	dynamic referencing
	narrowing cast
	up cast
✓	widening cast

52 Identify the behaviors of Abstract Classes.

(More than one answer is correct)

✓	Methods can only be implemented in the subclass
✓	Cannot be instantiated
	Can only be implemented through an Interface
	Methods can not be implemented in the subclass

53 Where are the methods of a class implemented

	Call method of the class
✓	Implementation part of a class
	Definition part of Class
	Object instantiation part of a program

54 In ABAP objects, which compnent is said to determine an objects behavior

✓	method
	signature

implementation
class

55   Pick the syntax for a functional method with only 1 parameter

(More than one answer is correct)

✓   refvar->method(im = p1)
                refvar->method returning()
                refvar->method receiving()
✓   refvar->method(p1)

56   The concept of restricting direct access to data via hidden internal
        processes is best represented by which term

                Polymorphism
✓   Encapsulation
                Instantiation
                Inheritance

57   What name is always given to a static constructor ?

                class=>constructor
✓   class_constructor
                static_constructor
                constructor

58   Refer to the following code and Select the VALID method call

```
Class lcl_course definition.
  Public section.
    data:    course_name(12)  type c.
    methods: display_price
             importing im_course_name type string.

  Private section.

    Data:    price            type P value 100.
    constants: c_objects101(10) type c value 'OBJECTS101'.
```

```
endclass.


class lcl_course implementation.

  method display_price.
    course_name = im_course_name.
    If course_name = c_objects101.
      Write: price.
    Endif.
  endmethod.

endclass.

Data obj_course type ref to lcl_course.

start-of-selection.

  create object obj_course.
```

   ✓   Call method obj_course->display_price exporting im_course_name = 'OBJECTS101'.
Call method obj_course->display_price importing im_course_name = 'OBJECTS101'.
Call method obj_course->display_price exporting course_name = 'OBJECTS101'.
Call method obj_course->display_price exporting im_course_name = c_objects101.

59   Where would the components of a class be defined

___

   ✓   Definition part of Class
Logic component of a program
Implementation part of a class
Data Component of a program

60   A public attribute 'color' is added to a superclass. A subclass already has the same attribute 'color'. What is the outcome ?

___

(More than one answer is correct)

                  The superclass is invalidated
   ✓   A syntax message will occur

      A runtime error will occur

✓   The subclass is invalidated

---

61   What can be said about the lifetime of an object

✓   All answers are correct

      An object exists for as long as it is being used in the program

      An object exists as long as at least one reference points to it

      An object exists as long as at least one method of the object is registered as an event handler.

---

62   Refer to the following code and identify the statements that are TRUE

```
CLASS lcl_course DEFINITION.
   PUBLIC SECTION.
     METHODS: get_course_name IMPORTING im_name type string.
     CLASS-METHODS: list_prices_and_discounts.
ENDCLASS.

CLASS lcl_course IMPLEMENTATION.
   METHOD get_course_name.
   ENDMETHOD.

   METHOD list_prices_and_discounts.
   ENDMETHOD.
ENDCLASS.

Data: course1 type ref to lcl_course,
      course2 type ref to lcl_course.

Start-of-selection.

Create object course1.
Course2 = course1.
```

(More than one answer is correct)

      Memory is reserved for 2 instances of lcl_course

✓   Only one instance of method list_prices_and_discounts exists

      Only one instance of method get_course_name exists

Method list_prices_and_discounts can only be called once

✓ method list_prices_and_discounts is a static method

list_prices_and_discounts is a instance method

63   Local Class lcl_course has been defined in a program belonging to development class ZCL. What is the key entry in the repository table TADIR

R3TR ZCL CLASS

✓ None of the answers are correct

R3TR lcl_class

R3TR CLASS

R3TR LOCAL CLASS

64   What implications exist when private components of a class are changed

Users of the private components must change their interface

Any programs accessing the class must also change

None of the answers are correct

✓ Programs are insulated from change

65   What happens when the Set Handler command is executed

The Event is handled

The Event is triggered

An instance of the event is created

✓ The Event Handler Method is registered

66   Your program has registered several handler methods. How does the program know what methods are available for execution when an event is triggered

The methods defined in the Class Definition listen for raised events and respond when an event is

     triggered

     It is determined by the RAISE Event command

✓   the system looks for registered handler methods In the event handler internal table and processes those that are registered for the event

     the system looks for registered handler methods In the registry table and processes those that are registered for the event

67   In the context of Triggering and Handling of Events, mark those which apply
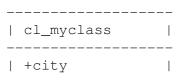
(More than one answer is correct)

✓   Event Triggering using   Raise Event   can be issued in a method

     An event is defined in the Implementation of a Class

✓   Methods must be registered to an event in order to be called when the event is triggered

     Events can be triggered with the   Trigger Event command

68   Identify the requirements that determine when an object gets deleted by garbage collection

(More than one answer is correct)

✓   When there are no more references pointing to an object

     When all active objects are marked

✓   When objects can no longer be addressed from main memory

✓   When none of its methods are registered as event handlers

69   Using the UML modeling language for ABAP OO design, refer to the following and indicate the visibility of the components

```
-------------------
| cl_myclass       |
-------------------
| +city            |
```

```
| #address          |
|------------------|
| + get_city()     |
| - display_addr() |
|                  |
|------------------|
```

(More than one answer is correct)

✓   address is protected attribute
✓   city is a public attribute
            get_city is a public attribute
✓   display_address is a private method
            display_address is a public method
            display_address is a static public method

70   What is true about classes and objects in Object Oriented ABAP

(More than one answer is correct)

✓   Objects are an instance of a class
            Objects can change their class
            Classes are an instance of an object
✓   Class is a template for an object

71   Initializing an object in a subclass requires that the constructor of the superclas is first called. Identify the correct syntax.

            Call Method Constructor
            Call Method Constructor-> Super
            Call Method Super Constructor
✓   Call Method Super-> Constructor

72   Identify the characteristics of the self reference ME

            The reference ME can be used to determine the dynamic type of the reference variable in the debugger
            The self-reference ME can be used to access individual components

Self references allow an object to give other
objects a reference to it.
✓ All answers are correct
None of the answers are correct

73 In the following method, what other parameters are allowed

```
CLASS lcl_course DEFINITION.
   PUBLIC SECTION.
     METHODS: get_course_name
                 IMPORTING im_name type string
                 Returning value(student_count) type I.
ENDCLASS.
```

Receiving
✓ Exceptions
Exporting
Changing

74 Identify the one addition that is not part of the interface of a method

Exception
✓ Result
Returning
Importing

75 Which statement will create an instance of a class

Class my_class Implementation
Class my_class Definition.
Data: my_object TYPE REF TO my_class
✓ Create Object my_object

76 Define Polymorphism

(More than one answer is correct)

it s a characteristic when methods from different
classes react differently to the same interface

✓   it s a characteristic when objects from different classes react differently to the same method call

✓   the same method is implemented in different ways by redefining the method in subclasses

✓   it s one of the main strengths of inheritance

     it s a characteristic when methods of the same class react differently to the same method call

77   How do you call the method in a superclass that has the same name as a redefined method in the subclass ?

     You can't . Only the redefined method can be called

✓   Call Method Super-> mymethod.

     Call Method Superclass-> mymethod.

     Call Method mymethod.

78   Mark the item that is NOT true about the handler table

     A single SET Handler command can be used to register multiple handler methods in the handler table

     Event handler methods are called in the sequence that they were registered in the handler table

✓   Registered Methods in the handler table can only be triggered by RAISE EVENT i.e. not by CALL METHOD

     There is a separate handler table for every object that has defined events

79   What syntax provides access to individual components of a class within the class

(More than one answer is correct)

     CALL METHOD object instance->ME->

     object instance->ME->

✓   CALL METHOD ME->

✓   ME->