

# NATIONAL SKILLS COMPETITION

## Competitions Sub-Committee

### IT PC AND NETWORK SUPPORT

(ITNS#2)

#### Table of Content

<b>1. NAME AND DESCRIPTION OF TRADE.....</b>	<b>2</b>
1.1.1. IT PC and Network Support.....	2
<b>2. SCOPE OF THE COMPETITION .....</b>	<b>2</b>
2.1. PRACTICAL WORK.....	3
<b>3. SKILL MANAGEMENT PROCEDURES (SM).....</b>	<b>5</b>
3.2 PRE-COMPETITION RESPONSIBILITIES .....	5
3.3 SKILL MANAGEMENT PROCEDURES FOR THE CHIEF EXPERTS.....	6
3.4 HONESTY AND TRANSPARENCY.....	9
3.5 INFORMATION POLICY .....	11
<b>4. TEST PROJECT MARKING.....</b>	<b>11</b>
4.2 MARKS .....	11
4.3 RATING.....	12
<b>5. COMPETITION PROCEDURE.....</b>	<b>12</b>
<b>6. JUDGING PROCEDURAL REQUIREMENTS.....</b>	<b>13</b>
<b>7. GENERAL SAFETY REQUIREMENTS.....</b>	<b>13</b>

**NATIONAL SKILLS COMPETITION**  
**Competitions Sub-Committee**  
**IT PC AND NETWORK SUPPORT**  
**(ITNS#2)**

**NATIONAL SKILLS COMPETITION**  
**Competitions Sub-Committee**  
**IT PC AND NETWORK SUPPORT**  
**(ITNS#2)**

**INTRODUCTION**

WorldSkills Jamaica , by a resolution of the National Organizing Committee and in accordance with the Constitution, the Standing Orders and the Competition Rules, has adopted the following minimum requirements for this skill for the National Skills Competition.

The Technical Description consists of the following:

- Section 1 – Technical/Competition Description (TD)
- Section 2 – Project Design Criteria (PD)
- Section 3 – Skill Management Procedures (SM)
- Section 4 – Workshop Setup (WS)
- Section 5 – Infrastructure List (IL)
- Section 6 – Appendices

Effective 01.04.07

Grace Mclean (GM)  
Chairman, Competition Committee  
01.04.07

Daphne Simmonds  
Co-Chair

# **NATIONAL SKILLS COMPETITION**

## **Competitions Sub-Committee**

### **IT PC AND NETWORK SUPPORT**

#### **(ITNS#2)**

The National Skills Competitions Sub-Committee has adopted the following minimum requirements for applicants' entry in the National Skills Competition.

The effective date will be that date on which this document is issued, and is subject to change by the National Skills Competition Steering Committee.

## **1. NAME AND DESCRIPTION OF TRADE**

1.1 The name of the trade is:

### **1.1.1. IT PC and Network Support**

1.2 Note: Here "PC" means "Personal Computer", not only the more common \_IBM compatible clone\_ meaning.

1.3 **This technical description must be known to every candidate.**

1.4 Words implying masculine gender only shall include the feminine gender

## **2. SCOPE OF THE COMPETITION**

2.1 The test project consists only of practical work

2.2 The theoretical knowledge is limited to that necessary to carry out the project work

2.3 Candidates should be capable of performing tasks to at least a level of:

- Microsoft (MSCE), Cisco CCNA, A+, Net Plus .....

2.4 All Operating Systems used in the competition are to be English language versions.

**NATIONAL SKILLS COMPETITION**  
**Competitions Sub-Committee**  
**IT PC AND NETWORK SUPPORT**  
**(ITNS#2)**

**2.1. PRACTICAL WORK**

- 3 Assemble a personal computer from its main components.
  - 3.1 Install add-on modules and peripherals for a personal computer. These may include generally available devices that utilize a range of IO methods.
  - 3.2 Perform hardware upgrades to computer equipment
  - 3.3 Identify and rectify hardware problems.
  - 3.4 Identify and rectify software problems.
  - 3.5 Conduct routine procedures on computer equipment, such as:
    - Plan and implement backup procedures.
    - Install and configure virus detection and removal.
    - Design and carry out appropriate system tests for checking system efficiency, reliability and data integrity.
  - 3.7 Install and configure operating systems as required.
  - 3.8 Install software packages to run locally on a personal computer.
  - 3.9 Install software packages to run remotely on a personal computer.
  - 3.10 Install and configure a network, including peer to peer and client/server.
    - Install and configure a network interface card.
    - Connect correct cabling for a LAN.

# NATIONAL SKILLS COMPETITION

## Competitions Sub-Committee

### IT PC AND NETWORK SUPPORT

#### (ITNS#2)

- Install and configure networking operating system (NOS).
- Install and configure appropriate network protocols and client part of NOS.
- Install and configure network specific devices and services

3.11 Administer a LAN (including advanced user / software and hardware configurations)

3.12 Troubleshoot a network including monitoring network performance.

3.13 Use software diagnostic tools.

3.14 Network design and implementation.

3.15 Simulations and Scenarios

It is anticipated that competition scenarios may include the assembly of various pieces of hardware to create working pieces of equipment and the installation of software onto this equipment.

#### **Schedule of Assessment**

	Day 1	Day 2
AM	network	Network
PM	network	

**NATIONAL SKILLS COMPETITION**  
**Competitions Sub-Committee**  
**IT PC AND NETWORK SUPPORT**  
**(ITNS#2)**

**3. SKILL MANAGEMENT PROCEDURES (SM)**

**3.1 DOCUMENTS REQUIRED**

3.1.1 The Chief Expert will have available a current copy of all documents associated with this skill for the Competition.

3.1.2 The documents required are:

- Technical Description
- Competition Rules
- Health and Safety documents
- QAMS – all documents
- Any other documents referred to in the documents listed above.

3.1.3 While it is understood that the Chief Expert will have a copy of these documents in there shall also be a complete set that is available for the experts and other competition workers.

3.1.4 The Chief Expert is expected to have a sound knowledge of the requirements and procedures specified in the documentation.

3.1.5 The Jury President is expected to have a thorough knowledge and understanding of the requirements and procedures specified in the documentation.

**3.2 PRE-COMPETITION RESPONSIBILITIES**

3.2.1 In the period between one National Skills Competition and the next, the elected Chief Expert is responsible to ensure that the requirements of Section 2 – Project Design Criteria are complied with.

# **NATIONAL SKILLS COMPETITION**

## **Competitions Sub-Committee**

### **IT PC AND NETWORK SUPPORT**

#### **(ITNS#2)**

### **3.3 SKILL MANAGEMENT PROCEDURES FOR THE CHIEF EXPERTS**

The following speaks to the procedures prior to and during the Competition

3.3.1 The procedures specified below must be adhered to.

3.3.2 On arrival at the Competition site for the first time, the Chief Expert must:

- Welcome the experts and ensure introductions are made
- Inform them of their duties and responsibilities in terms of the Competition Rules and Standing Orders
- Ensure that the project is endorsed by all the experts and that a copy is signed by all the experts

3.3.3 The Chief Expert will then divide the experts into teams for the following activities:

- Verify that the material on site is appropriate and sufficient
- Verify again that the quantities of material as specified on the material list is accurate
- Develop a program for the competitors to complete the modules
- Develop timetables for activities
- Set up equipment
- Confirm that the layout, work areas and equipment are in accordance with the workshop setup requirements
- Confirm that all machinery/equipment is in a safe working order
- Confirm that all workstations/machinery/equipment are in accordance with the plan, and that they are numbered
- Confirm that there is sufficient illumination
- Confirm that there is sufficient space for the competitors to work efficiently
- Confirm that the barriers are far enough removed from the competitors to ensure that there will be no interference, and if they are not, set up a roster among the experts to police the area during the Competition

## **NATIONAL SKILLS COMPETITION**

### **Competitions Sub-Committee**

#### **IT PC AND NETWORK SUPPORT**

##### **(ITNS#2)**

- If necessary, set up duty rosters for activities during the Competition – e.g. keeping watch during lunch, preventing access of unauthorised persons, etc
- 3.3.4 The Chief Expert will then divide the experts into teams for purpose of marking and setting up marking schedules in accordance with the requirements.
- 3.3.5 Suggestions and comments for the revision and improvement of the Technical Description are to be provided to the Deputy Chief Expert in writing. The Deputy Chief Expert will reduce the information to a single typed document ready for discussion by all experts. Prior to leaving the Competition site, the Chief Expert, the Deputy Chief Expert and the Jury President will facilitate the discussion and revision of the Technical Description.
- 3.3.6 At any time that a unanimous decision is not achieved within a reasonable time, the Chief Expert will put the matter under discussion to the vote. A majority will be 50% of the experts present plus one. This decision will be final. In the event that an expert is absent at the time that the vote takes place, he/she has the right to be informed of the decision but the matter will not be raised again or voted upon again. The exception to this majority rule will be in the case of approval of the changes to the Technical Description, where the majority of 80% is required.
- 3.3.7 In the event that an extension of time is requested for the Competition to exceed the allotted hours, the matter must be discussed with the Jury President. All possible alternative solutions must be investigated before approval of an extension of time is requested, or will be approved.
- 3.3.8 Prior to the end of the Competition, the Jury President will facilitate the selection of the Chief Expert and Deputy Chief Expert for the next national Skills Competition.

## **NATIONAL SKILLS COMPETITION**

### **Competitions Sub-Committee**

#### **IT PC AND NETWORK SUPPORT**

##### **(ITNS#2)**

3.3.9 Experts are eligible for selection as a Chief Expert if they:

- Have attended the National Skills Competition at least twice before (if less than 4 experts have been to the National Skills Competition before, this criterion may be relaxed at the discretion of the Jury President)
- Demonstrate a high degree of expertise in the skill
- Demonstrate leadership qualities.
- Are competent using a computer and the Internet – specifically to facilitate the Discussion Forum for their skill category.

3.3.10 The process by which selection will take place is by secret ballot and is as follows:

- Each expert present will list their choice of three experts in order of preference
- The Jury President will allocate a score of three (3) points to each experts first preference, two (2) points to the second preference and one (1) point to the third preference
- The Jury President will then calculate total scores and announce the three highest scoring experts
- The expert with the highest score will be appointed Chief Expert for the next National Skills Competition
- If the first choice cannot attend, then the second choice will be Chief Expert
- If the first and second choice cannot attend, then the third choice will attend
- If none of the choices can attend, then the jury president will appoint, or facilitate the appointment of a Chief Expert
- The names of the selected experts will be entered into the provided documentation and signed by the Jury President and returned to the co-chair of the competitions committee.

## **NATIONAL SKILLS COMPETITION**

### **Competitions Sub-Committee**

#### **IT PC AND NETWORK SUPPORT**

##### **(ITNS#2)**

- 3.3.11 Changes to the method of Competition design or suggestions offered for the next Competition design process or tasks must be written down and signed by 80% of the experts.
- 3.3.12 The Deputy Chief Expert's primary role is to ensure that the Technical Description is updated to reflect the technological advances of the skill category and include overall improvements for the preparation and running of the Competition. He/she will ensure that all changes to the Technical Description are entered, that all experts sign it, and that it is delivered to the co-chair of the competitions committee as a hard copy and digitally.
- 3.3.13 The Deputy Chief Expert also assists in the distribution and collection of the QAMS Audit Questionnaires and assists the Chief Expert where necessary.

### **3.4 HONESTY AND TRANSPARENCY**

- 3.4.1 The competitors that attend the National Skills Competition have the right to expect fair and honest treatment during the Competition in terms of the following:
- Instructions that are clear and unambiguous
  - Marking schedules that provide no advantage to an opposing competitor
  - All necessary equipment and material specified within the skill documentation that are required to complete the Competition
  - The assistance necessary from judges and officials to ensure that he is able to complete the project. (The assistance deemed necessary will be provided equally and at the same time to all competitors present)
  - No undue interference by officials or spectators that may hinder them in the completion of their project

## **NATIONAL SKILLS COMPETITION**

### **Competitions Sub-Committee**

#### **IT PC AND NETWORK SUPPORT**

##### **(ITNS#2)**

- 3.4.2 Every competitor has the right to expect and demand that no opposing competitors will receive undue or unfair assistance or intervention that may provide that opposing competitor with an unfair advantage.
- 3.4.3 All officials and judges present on the Competition site are expected to ensure that paragraphs 3.4.1 and 3.4.2 above are complied with and maintained.
- 3.4.4 It is the responsibility of the Chief Expert or his Deputy to ensure that all competitors, interpreters, officials and judges comply with and maintain the integrity of the Competition, and additionally ensure that all necessary steps are taken to ensure that:
- Outside influences do not unduly improve or decrease competitors' abilities to provide a worthy performance.
- 3.4.5 A briefing will be provided to all experts and competitors on the requirements for integrity during the Competition.
- 3.4.6 Additionally, the Chief Expert is expected to identify these and any other factors that may exist on the Competition site that may results in the contravention of paragraphs 3.4.1 and 3.4.2 above, and reduce them to a checklist for continuous reference.
- 3.4.7 In the event that any competitor, judge, official, observer or competitor compatriot is found to be attempting to gain or provide assistance in any form that may result in an unfair advantage, the Chief Expert is to immediately refer the matter to the Jury President.
- 3.4.8 The Chief Expert will receive nominations and appoint a Security Officer whose responsibility it will be to ensure that these requirements are carried out.

# NATIONAL SKILLS COMPETITION

## Competitions Sub-Committee

### IT PC AND NETWORK SUPPORT

#### (ITNS#2)

3.4.9 It will be explained to all experts and competitors that nothing is to come in or out of the site unless specified by the Chief Expert as being allowed after being briefed on this topic.

3.4.10 Security checks will be carried out each day on experts and competitors (by experts and competitors) upon entry and exit to the site.

### **3.5 INFORMATION POLICY**

3.9.1 During the competition a modified project plan without measurements is to be made available to the public.

## **4. TEST PROJECT MARKING**

6.1 The competitors work may not be altered in any way to facilitate marking unless included in the marking scheme.

### **4.2 MARKS:**

Perfect	=	10 points
Very good	=	9 points
Good	=	8 points
Rather good	=	7 points
Sufficient	=	6 points
Medium	=	5 points
Weak	=	4 points
Insufficient	=	3 points
Very bad	=	2 points
Zero	=	1 point

**NATIONAL SKILLS COMPETITION**  
**Competitions Sub-Committee**  
**IT PC AND NETWORK SUPPORT**  
**(ITNS#2)**

**4.3 RATING**

<b>Section</b>	<b>Item</b>	<b>Maximum</b>
	<b>Points</b>	
A	Fault finding, diagnostics and troubleshooting	25
B	Installation, configuration, upgrading and maintenance of software	20
C	Installation, configuration, upgrading and maintenance of hardware	20
D	Installation, configuration, upgrading and maintenance of the network	35

**Points will also be awarded for creativity, innovation, speed etc. (This will be developed by the judges depending on the nature of the test project).**

**5. COMPETITION PROCEDURE**

7.1 .Modules will be completed on each day for all competitors so that the progressive marking can take place, and for results to be made available each day.

7.2 Competitors will have time at their disposal to familiarize themselves with material and processes. Where processes are particularly difficult, assigned personnel will demonstrate the process and the competitors will be given the opportunity to practice.

7.3 The competitors will be given all competition documents including the marking criteria prior to the commencement of the competition so that they may study the requirements

# **NATIONAL SKILLS COMPETITION**

## **Competitions Sub-Committee**

### **IT PC AND NETWORK SUPPORT**

#### **(ITNS#2)**

7.4 Prior to the start of the competition, each competitor will receive a detailed timetable reflecting the timing for completion of modules.

## **6. JUDGING PROCEDURAL REQUIREMENTS**

6.1 The experts that attend the completion will be divided into marking groups to deal with each section of the marking criteria.

6.2 Every completed module will be marked the same day on which it was completed.

## **7. GENERAL SAFETY REQUIREMENTS**

7.1 All competitors must use ergonomic equipment when:

- seated and working at their workstations
- reading any relevant documentation

7.2 Competitors must keep their workspace clear of obstacles and the floor space clean of materials and equipments – any items likely to cause the competitor to trip, slip or fall.

7.3 Failure by the competitor to comply with safety directions or instructions may incur a reprimanding from the experts group.